



CASMAG

The official magazine of the Canterbury Astronomical Society

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

Monthly Meeting: Our Monthly Meetings are held on the 3rd Tuesday night of the month. Refreshments from 7.30pm Meeting starts at 8pm the month. Our meeting venue is room ER225 in the Ernest Rutherford building at Canterbury University. Level 2 Refreshments from 7.30pm Meeting starts at 8pm

AUGUST MEETING: 20TH AUGUST 2024 Chester Hall-Fernandez

Chester will share with you his most recent project at Mount John Observatory, where he designed and built the observatory all-sky camera.

All-sky cameras are weather proof cameras that are constantly monitoring the sky 24/7, allowing astronomers to monitor the sky

2024 ANNUAL SUBSCRIPTIONS/MEMBERSHIP

Payment for the 2024 Year is now very overdue

This can be paid via internet banking, PayPal, eftpos/cash in person, Please use your name & member number in your reference when making payment, (this can then be matched to your membership)

PLEASE advise any changes to your details: Address, Phone Number, email, Please email any changes to membership@cas.org.nz

If these details are not updated we will be unable to contact you. Membership Fees and Banking payment details are included on the back page of every CASMAG

membership@cas.co.nz

MEMBERSHIP



IN THIS MONTHS ISSUE

Front Cover;	Monthly meeting information
Page 2:	In this Issue /Editor Notes
Page 3:	Calendar Dates /Stardate SI 2025 Info
Page 4:	2024 Open Nights /Monthly Meeting Info
Page 5:	Open Night Season Information
Page 6:	Welcome to our new Members
Page 7:	Observatory Info/Starlight Conference Info
Page 8:	CAS Merchandise Available
Page 9:	CAS Merch Available
Page 10:	Library Corner
Page 11:	ASTRONZ Referral Scheme
Page 12:	Members Interest Section/Quotes for the Month
Page 13:	Lodge Security <u>IMPORTANT INFORMATION</u>
Page 14:	Evening sky in Map for August 2024
Page 15:	Evening sky in Text for August 2024
Page 16:	Evening sky in Map for September 2024
Page 17:	Evening sky in Text for September 2024
Page 18:	Contact Information
Page 19:	Membership Form/Payment Details

From Your Editor

Its August already, over half way through the year

This is your Casmag, for YOU our members,
So I welcome any ideas or articles you would like to share with the other members. Please email your Article or favourite photo with details so I can include it in future issues.

Deadline for each issue is 1st of each month

Remember you can have your advert added in the future casmag's,

Any questions, Ideas or suggestions please email to editor@cas.org.nz

Dale Kershaw

Please see page 18 for notes:

CAS Calendar August - October 2024



AUGUST 2024

Sunday 4th	New Moon
Tuesday 13th	First Quarter Committee Meeting
Tuesday 20th	Full Moon CAstronauts @ University 6.30-7.30pm Members Meeting @ University from 7.30pm
Saturday 24th	Training and Members Night @ Observatory
Monday 26th	Last Quarter

SEPTEMBER 2024

Sunday 1st	Fathers Day
Tuesday 3rd	New Moon
Tuesday 10th	Committee Meeting
Wednesday 11th	First Quarter
Tuesday 17th	CAstronauts @ University 6.30-7.30pm Members Meeting @ University from 7.30pm
Wednesday 18th	Full Moon
Saturday 21st	Training and Members Night @ Observatory
Wednesday 25th	Last Quarter

OCTOBER 2024

Thursday 3rd	New Moon
Tuesday 8th	Committee Meeting
Friday 11th	First Quarter
Tuesday 15th	CAstronauts @ University 6.30-7.30pm Members Meeting @ University from 7.30pm
Friday 18th	Full Moon
Saturday 19th	Training and Members Night @ Observatory
Thursday 24th	Last Quarter
Monday 28th	Labour Day Holiday

STARDATE SI 2025

Stardate SI 2025 is set for *Thursday 28th February till Sunday 2nd March*, Starting on the Thursday afternoon through till Friday evening set as free time and hopefully some extra viewing on the Thursday night

Any questions please email either campmother.stardatesi@gmail.com or euan@treesandstars.com

Updates will be on the website <https://www.treesandstars.com/stardate/> and the Stardate Facebook page

NOTE: If we do not get the minimum required booking for the Thursday/Friday we will revert back to Friday afternoon start.

Come along and enjoy an extra day/night under the amazing skies

2024 Open Night Season

Our 2024 Open night season started on 12th April 2024 after the daylight saving change on 7th April 2024.

We have had a very slow season with the weather affecting our Open nights

We do have them booked for every Friday night for the public and most Wednesday nights for private Groups.

Notices will be posted on our website. We look forward to seeing you at these events.

Our Thanks to those of you who volunteered for our KIDSFEST NIGHTS. We were open for of 5 sold out nights of the 14 nights.

Your volunteering helps assist in supporting the society financially. Please read next page for more information on open nights

Your CAS Committee.

MONTHLY MEETINGS:

Meeting Venue:

Room ER 225 in the Ernest Rutherford Building, University of Canterbury, Entrance to the building will be via the north side entrance, Then using the lift or stairs up to level 2

If you have any suggestions for speakers or would like to give a talk at our members meeting

PLEASE CONTACT MANDY WITH YOUR SUGGESTIONS OR IF YOU CAN GIVE A TALK via secretary@cas.org.nz

Upcoming Members Meeting Dates:

20th August: Chester Hall-Fernandez

17th September: Soap Box Evening

15th October: TBC

19th November: Quiz Night with John Pickering & Rob Glassey

REMINDER: NO MEMBERS MEETINGS

DECEMBER OR JANUARY

(correct as at 10th August 2024, Subject to change as required)

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

Also Thanks to Associate Professor Karen Pollard for organising the Lecture theatres for our public talks

2024 Open Night Season

Its that's time again! Doesn't it come round quick!!!

This years open night programme started on **Friday 12th April.**

These nights are run as part of our Public Outreach.

This is our main income towards running our society and of course the observatory. These events also bring in our new members.

Full training is available for those who come along to help.

This can also work towards your accreditation

Why are these so important to CAS?

They give CAS an opportunity to engage with our local communities and build strong relationships with them and key stake holders like Selwyn Council.

Provide a perfect opportunity to educate our visitors on the night sky and the hobby of astronomy

They are a great source of new members !

Your volunteering helps assist in supporting the society financially.

So how can you help?

We need volunteers for our open nights to help run the evenings.

It takes about 6-7 people a night to run these, from helping people check in, our welcome brief, laser tour of the night sky and then running our scopes.

We normally assemble at CAS around 6.30pm and run till about 9-9.30 depending on bookings.

The more volunteers we get the less burden it places on others and helps spread the load but I can say its VERY rewarding and highly engaging activity, the kids love it and its amazing to see and hear them so excited about their time at CAS.

If you would like to help you can approach any of the committee

We have a volunteer booking system we use so you can choose a night to volunteer for and the system will also send you reminder emails too!

Check it out at cas.ivolunteer.com

There is 3 heading to chose from

1/ for FCAS open Nights 2024 (Fridays)

~~2/ for Kidsfest 2024~~

3/ for Private Group Nights 2024

If you have any question's please contact a committee member.

WELCOME TO OUR NEW MEMBERS:

A warm welcome to our new members, We look forward to meeting you at our meetings and/or events, Please make yourselves known to others. We like to welcome our new members here after the membership is accepted by the committee at the meeting following memberships are received.

Welcome to these New Members we accepted recently:

Arti Sangwan - *Family*
 Amir Bastani - *Family*, Vahideh Karimirad, Nikan, Nikki Bastani
 Jason Hester - *Adult*
 Nicholas Fagg - *CCS*
 Elliott Grey - *Student*
 Victoria Ding - *Student*
 Steven Graham - *Senior*
 Phillip Anderson -*Family*, Freda, Claudia, Scarlett, James Anderson
 Phillip Shillito - *Adult*
 Michael Bush - *Student*
 Jason Kruger - *Family*, Callie Miller, Nolan, Tessa Kruger
 Cindy Wilkins - *Family* Miles Wilkins
 Megan Gardiner *Family*
 Rosemarie Keen -*Student*
 James Rankin -*Senior*
 Wendy Genet -*Senior*
 Gregory Nuthall -*Adult*
 Kristina Bright -*Family*, Jeremy, Sebastian, Jean, Tibias, Eleanor Bright
 Sophie Meares *Family*, Phillip Meares
 Anne Whitehead-*Senior*
 Coran Griffin - *Family*
 Damian Neale - *Family*
 Jess Banfield -*Family*, Kent Deverson, Peter, Henry Deverson Emmalin, Rigel Banfield
 Myra Salter -*Senior*
 Wayne Owens -*Senior*
 Adrianna Hucker -*Family*, Neil Hucker

Welcome to all our New Members, I hope you enjoy reading CASMAG and remember to keep an eye on the website for any updates

It is always great to see our new members coming along to our Members Meetings, Members Nights and Events.



Apologies from the editor for any spelling mistakes in the names

OBSERVATORY IMPORTANT INFORMATION

DOOR CODE & ALARM AT THE OBSERVATORY

The Door code and Alarm code has been changed with the new lock being installed available to members, Ask a committee member for the passwords.

INTERNET WI-FI:

Ask a committee member for the password

LASER POINTERS:

There is a legal requirement when importing them, and information is on our website and at the observatory, CAS has a drafted a set of guidelines which we were presented at our AGM and were voted and added to our By-Laws,

If you need a letter confirming your membership for your application, please contact either membership secretary or secretary, (This letter will state you are a current financial member of our society)

ACCREDITATION

A reminder that unless you have full accreditation on the equipment you are not to use the equipment unless there is an accredited person with you.

Full training is available, Please ask our Observatory Director how you can get your Accreditation. There is a full list of accredited person's on the wall above the kitchen sink inside the lodge. contact Brent (our Observatory directory via his email listed on our website or the inside back page of this casmag

NEW ZEALAND STARLIGHT CONFERENCE 2024

The New Zealand Starlight Conference in Tekapo, New Zealand will take place between the **20th and 23rd of October 2024.**

The main theme of the Starlight Conference 2024 is

Dark Skies for All: a Call for Action!

The conference helps to promote New Zealand as a world leader for dark skies protection and astro-tourism.

It also highlights the health and environmental impacts of artificial light at night (ALAN) by engaging with world experts who contribute conference presentations.

Presentations of the latest research on the hazards of blue light emissions from LED streetlights will be made, so that New Zealand communities, local government officials and lighting engineers can install lights which comply with the best international practices.

<https://starlightconference.org.nz/registration/>

CAS MERCHANDISE

EFTPOS now available for payments

NEW STYLE OF CAS PENS NOW AVAILABLE IN 2 STYLES \$3.00



These are all black ink and with a variety of barrel colours

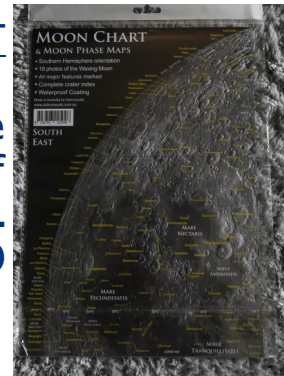
STAINLESS DRINK BOTTLES: \$10/00 ~~\$15.00~~ with flip top 750ml



8

MOON CHART

sheets showing Moon phase maps, with waterproof coating.
\$15.00



DOUBLE -SIDED PLANISPHERE FOR SOUTHERN HEMISPHERE \$20.00



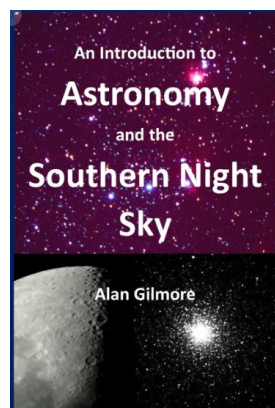
SUN-DISK KIT, \$25.00
Make a sundial at home



We have a wide selection of other merchandise items available, including:

Earrings, Necklaces, Bracelets
Keyrings, Children's Sox's,
Fleece Blankets, Red light torches,
Space Plasters, and much more

To view /purchase
contact Dale
editor@cas.org.nz or
0272426376



An Introduction to Astronomy and the Southern Night Sky,
by
Alan Gilmore
\$45.00

CAS CLOTHING RANGE

Waterproof Stickers **New TYPE** with our logo are also available \$2.50 each

CAS Beanies: Now in stock. Wool Blend Beanie with the CAS logo \$20.00

CAS Sew-On LOGO Badges: Now in stock \$10.00 each

The following we will take orders and then order the items, 1-2 weeks

Delivery from order) We have some samples of each of the following items

Cas Soft Shell Jackets = Sizes S— 8XL \$65.00

Cas Polo Shirts = Sizes S—5XL \$45.00

Cas Zip Front Polar Fleece Jackets = Sizes 2XS -5XL \$47.00

Cas T-Shirts = Sizes 3XS—8/9XL \$22.00

Full size charts available for ordering the correct size. Payment can be cash or bank deposit

They are available from Editor (Dale), contact via editor@cas.org.nz or 0272426376

CAS ASTRONOMY LOG BOOKS FOR SALE

The CAS Committee lead by Terry have designed and produced these Log Books for sale.

\$15.00 each. (Plus postage if required)

Contact Dale for your copy. Email: editor@cas.org.nz

A5 size 100 pages ring bound.

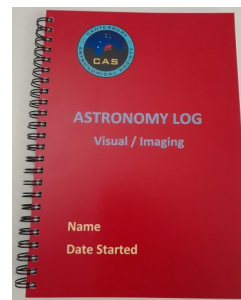
Inside 1st 2 pages has handy hints for observing

*Assessment if Seeing

*Transparency

*Angle Measurement Guide

*Brightness Scale



**EFTPOS
Available**

3d Printed Items Available:

Simon has been busy using his new 3d Printer creating items for sale. Including. We will have other new items as they are made.

Watch this Space

Space Rocket Lamps (usb power) in 2 sizes Small \$30, Large \$35

Jupiter Lamp Large \$45.00

Moon Planter Pots with screw on drain base.

Small \$15.00, Medium \$25.00 Large \$35.00

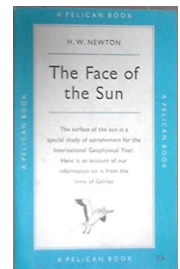
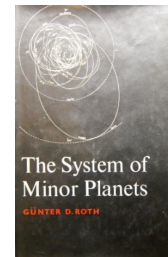
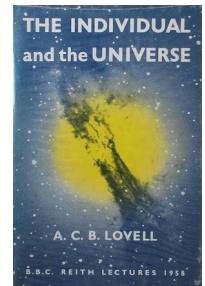
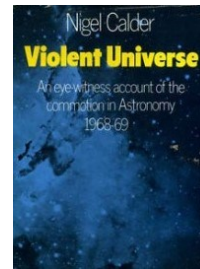


LIBRARY CORNER

Our CAS Librarian, Sean has been working through our library at the Observatory, sorting the many donated books, filing those returned to the shelves, often finding 2 and sometimes 3 copies of the same book. Along with a general tidy up. While doing this he has discovered that we have multiples of some copies, and the committee has agreed that we offer these to our members on a no return basis. (when you have finished with it (if ever) pass it onto someone else who will enjoy it). Books will be listed in future casmags and can be claimed for adoption by emailing Sean at librarian@cas.org.nz.

This Months Books for Adoption are:

1. Violent Universe by Nigel Calder.
2. The Individual and the Universe.
3. The System of Minor Planets by Gunter D Roth
4. The Face of the Sun by H W Newton
5. Sky Atlas 2000.0 (Second Edition)



If you are interested in any of these books please email Sean which book/s you are after and he can organise getting the book/s to you (1st in gets the book)

Remember these are not for return to the library

If you have seen a new book available and think it would be a good addition to our CAS Library please email the details to Sean and he can sort purchasing this

BOOK COLLECTION DONATIONS:

As we have had many generous donations of books over the years to avoid double ups and disappointment Please contact Sean before hand, if you or your family wish to donate books so he can advise the best plan for this.

Email Sean @ librarian@cas.org.nz

ASTRONZ

For all of our members “ASTRONZ” offers

Friends of Astronz Referral Scheme

How it Works

- When someone purchases an item from ASTRONZ, they can use a unique referral code linked to your society or business.
- Your society or business receives 5% of the purchase amount (subject to terms and conditions) as a token of our support.
 - Referral rewards are accumulated and distributed quarterly.

How to Participate

The ways to engage with our referral scheme:

1. **Unique Referral Code:** Members can use your society's specific code during

This means that CAS receives a donation from ASTRONZ when you make your purchases.

You need to use this code when ordering for CAS to benefit from the scheme

Code: 'AS-CAS'

Check out the website; <https://astronz.nz/>

We welcome *Andrew Buckingham* back to ASTRONZ, Andrew has a huge knowledge base and is very happy to answer your questions



Members Interest Section

This section is dedicated to members on what **you** have as an interest under the umbrella of Astronomy.

Do you like: Meteors / Comets / Photometry / Solar observing / Photography / Telescope building / Spectroscopy / Aurora's / Occultation's / Variable Stars / Satellite tracking / Lunar observations/ Jupiter impact monitoring / Radio Astronomy / Eclipses ? **Or**

Do you have other interests that you would like to share and see who else would enjoy knowing some more? Form your own interest section. Here's a couple of ideas that if you would like to know more about You can also use the CAS forum to discuss other ideas to check out who else would be interested.



Tune into Jupiter or the Sun with Radio Astronomy

Radio astronomy can be done during the day and even cloudy nights. Terry has built a receiver and with his computer can log activity of the Sun and Jupiter.

Terry Richardson

member1@cas.org.nz

Cell: 021 776 458

Bounce Signals off the Moon

Beam a signal at the Moon or at a lunar orbiting satellite
Simon Lewis

Vice.president@cas.org.nz

Cell: 022 640 6649

Spectroscopy

CAS has recently purchased a diffraction grating which can be attached to a telescope eyepiece or camera on the telescope.

The grating, like a prism, spreads the light from starlight into component colours (distribution of wavelengths). Thus begins the engaging look into the not so private lives of stars, nebulas and galaxies.

Ray Pointon

rpointon@cyberxpress.co.nz



QUOTES OF THE MONTH

“For most of history, anonymous was a woman”. Virginia Woolf.

“Being humble means recognising that we are not on Earth to see how important we can become, but to see how much difference we can make in the lives of others”. Gordon B. Hinckley.

“The fact that an opinion is widely held is no evidence that it is not utterly absurd”. Bertrand Russell.

“My desire to be well-informed is currently at odds with my desire to remain sane”. Cartoonist David Sipress, New Yorker

“I fear the man who drinks water and so remembers this morning what the rest of us said last night”. Benjamin Franklin.

Quotes sourced from RASNZ Newsletter

OBSERVATORY NEWS IMPORTANT INFORMATION

New Security System in Lodge

The new security system in the Lodge is up and running well. This takes the form of an intrusion sensor outside, and a Wifi cam inside the lodge in the back corner at the car park end. The intention is to add another camera outside the lodge overlooking the car park area. The advantage of these is that they will trigger on intrusion alert and can be viewed remotely in real time or reviewed within 2 weeks. These are not for the purpose of watching people, but rather to check that entry to the lodge is by legitimate members. Given the assets we have on site, this is necessary for any insurance claims.

Access to these cameras is limited to Webmaster, Vice President and Observatory director only. We already have a surveillance network installed (several years ago) which records to a hard drive but cannot be remotely viewed in real time.

If anybody needs to know more please feel free to email me
observatory.director@cas.org.nz

SECURITY FOR OBSERVATORY KEYS- Accredited Members

Committee have decided that we need improved security for access to the observatory equipment. From now all keys are stored in a lock box in the library.

Any accredited member will be given the combination (just ask me).

This includes the key to the equipment room and for the dobs.

Although the dobs do not require formal accreditation, they are precision instruments that can be damaged if not used correctly.

A member accredited on any of the scopes can open these for you.

Members still have free access to the lodge and its facilities, but any other access will require an accredited person to be present.

Any accredited member can get access to the keys,

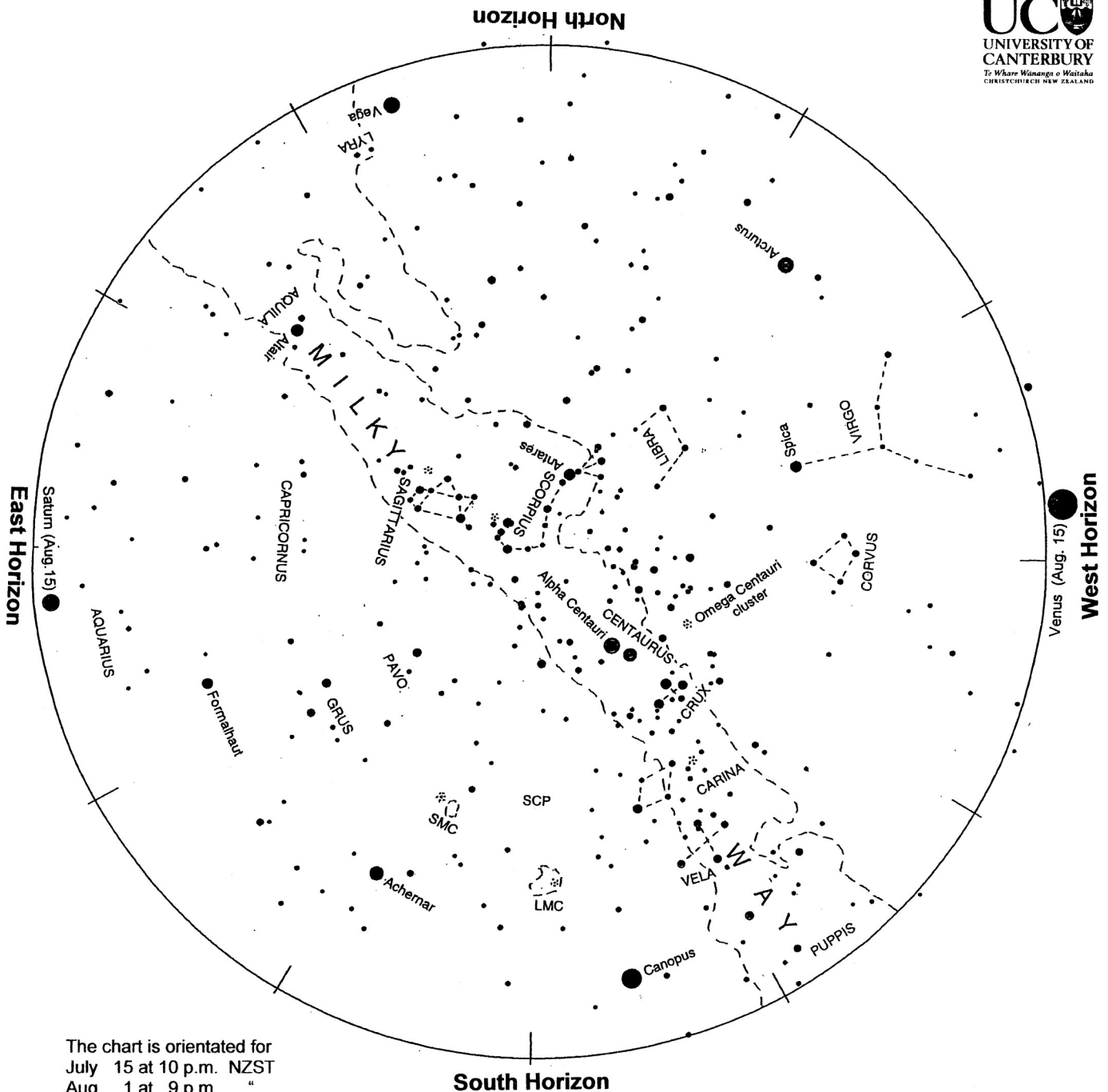
but of course can only use (or supervise) the instrument they are accredited for.

This sounds a bit restrictive, but has become necessary due to recent misuse and possible damage to some instruments.

Any questions please email me
observatory.director@cas.org.nz
Brent Schroeder



The Evening Sky Map for August 2024



The chart is orientated for
 July 15 at 10 p.m. NZST
 Aug. 1 at 9 p.m. "
 Aug. 15 at 8 p.m. "
 Sep. 1 at 7 p.m. "

Evening sky in August 2024

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 clockwise rotation each night as we orbit the sun.

Venus is the 'evening star', setting an hour after the Sun at the beginning of the month and two hours after sunset at the end. Mercury is above Venus in the first week but fades and falls into the twilight. Saturn is a medium brightness 'star' low in the east at 8 pm mid-month. Orange Arcturus is in the northwest, often twinkling red and green. Vega is on the north skyline. The Pointers and Crux, the Southern Cross, are midway down the southwest sky. Canopus, low in the south, twinkles all colours. The Milky Way spans the sky.

The Evening Sky in August 2024

Venus is the brilliant 'evening star'. It sets before 7 pm at the beginning of the month. Mercury is then straight above Venus, looking like a medium-bright star. Between it and Venus is Regulus, the brightest star in Leo. Venus and Mercury hold their elevation in the evening twilight, at first, while Regulus slips lower night-to-night. On the 5th and 6th Regulus will be just to the left of Venus. On the 6th the thin crescent Moon will be to the right of Venus. Mercury fades and slips lower in the sky. By the 10th it will be level with Venus but faint in the twilight. Venus sets later as it swings out from the far side of the Sun. At the end of August it will be setting around 8 pm, two hours after the Sun.

Saturn is the only other planet in the evening sky. It rises due east around 7:40 mid-month. It looks like a medium bright star with a cream tint. It is likely to be fuzzy in a telescope when low in the sky. The ring is nearly edge-on to us so looks like a line on each side of the planet. Saturn's biggest moon, Titan, is within four ring-diameters from the planet. Big telescopes show other moons looking like faint stars closer in than

Titan. At dawn Saturn is low in the western sky.

The Moon will be near Saturn on the night of August 21st -22nd.

Bright stars are widely scattered over the sky. Vega on the north skyline is balanced by Canopus low in the south. Canopus twinkles with all colours as its white light is broken up by the air. So does Vega but, being fainter, it's not so obvious. Orange Arcturus is in the northwest, twinkling red and green as it sets.

Canopus is the second brightest true star. (Sirius, the brightest star, is in the morning sky.)

Arcturus is the fourth-brightest star in the sky and the brightest north of the equator. Vega is the fifth brightest of all the stars and the second brightest north of the equator.

North of the zenith is orange Antares, marking the body of Scorpius. The Scorpion's tail hooks around the zenith like a back-to-front question mark. Antares and the tail make the fish-hook of Maui in Māori star lore. Antares is a red giant star: 600 light years* away and 19 000 times brighter than the sun. Below or right of the Scorpion's tail is the teapot made by the brightest stars of Sagittarius. It is upside down in our southern hemisphere view.

Midway down the southwest sky The Pointers and Beta and Alpha Centauri, point down and rightward to Crux the Southern Cross. Alpha Centauri is the third brightest star in the sky (planets not counted) and the closest of the naked eye stars, 4.3 light years away. Beta Centauri, like most of the stars in Crux, is a blue- giant star hundreds of light years away and thousands of times brighter than the sun.

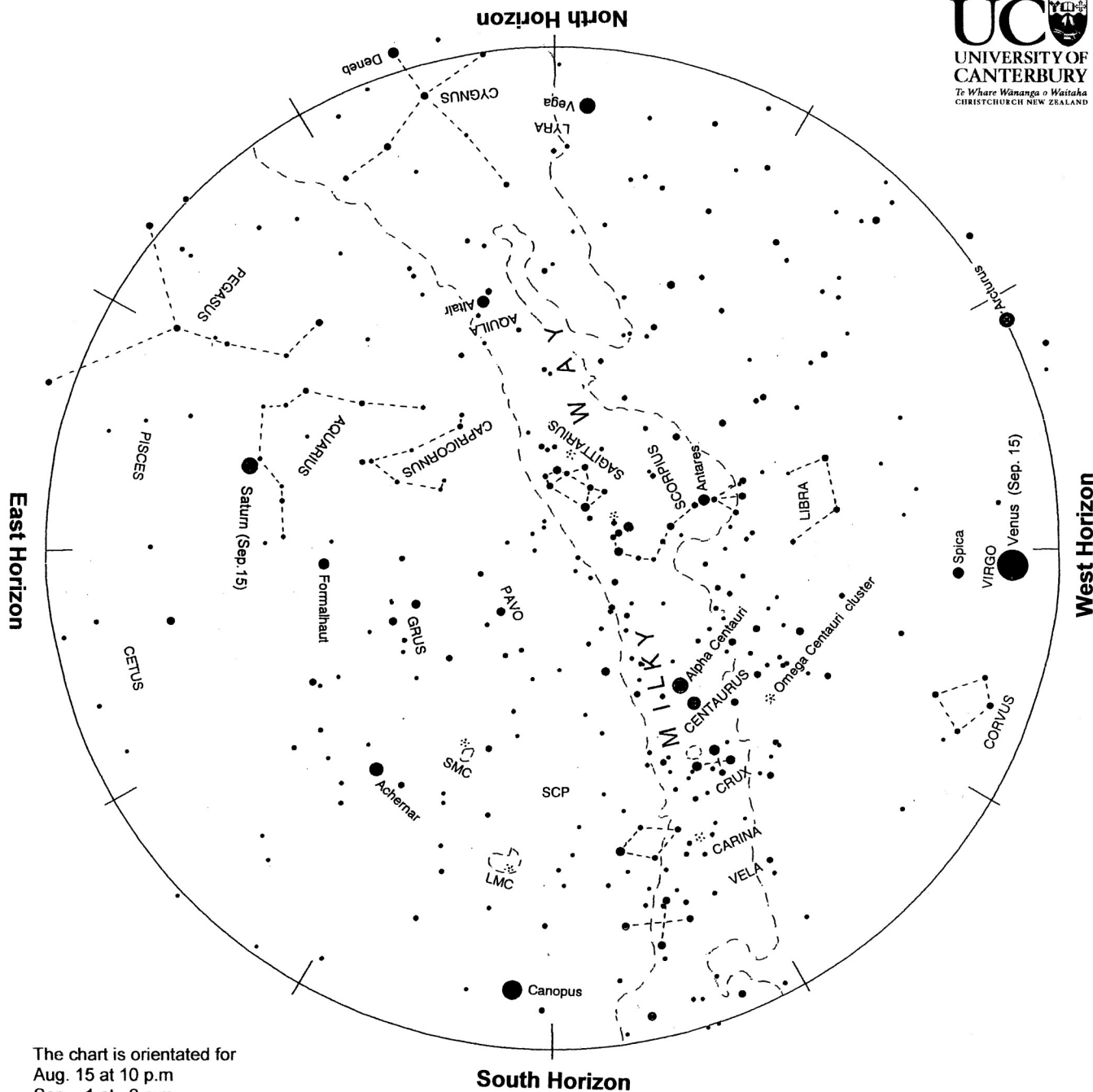
The Milky Way is brightest and broadest overhead in Scorpius and Sagittarius. In a dark sky it can be traced down past the Pointers and Crux into the southwest. To the northeast it passes Altair, meeting the skyline right of Vega. The Milky Way is our edgewise view of the galaxy, the pancake of billions of stars of which the sun is just one. The thick hub of the galaxy, 27,000 light years away, is in Sagittarius. The actual centre is hidden by dust clouds in space. The nearer dust clouds appear as gaps and slots in the Milky Way. Binoculars show many clusters of stars and some glowing gas clouds in the Milky Way.

The Large and Small Clouds of Magellan LMC and SMC look like two misty patches of light low in the south, easily seen by eye on a dark moonless night. They are galaxies like our Milky Way but much smaller. The LMC is about 160 000 light years away; the SMC about 200 000 light years away. Jupiter is the brightest 'star' in the morning sky (so not on the chart.) It rises in the northeast around 4 a.m. at the beginning of the month, and a bit after 2 a.m. at the end. At the beginning of August two orange stars will be above Jupiter. The one straight above Jupiter is Aldebaran, one eye of Taurus the bull. The orange 'star' to the left is Mars. Matariki is left of it. Jupiter and the stars move higher morning-to-morning while Mars stays put. On the 14th Mars will be just a full-moon's width left of Jupiter. After that it drifts down and right of Jupiter. The Moon will be below the two planets on the 28th.

*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 four years for sunlight to reach the nearest star, Alpha Centauri.

*Notes by Alan Gilmore, University of Canterbury's Mt John Observatory,
P.O. Box 56, Lake Tekapo 7945, New Zealand. www.canterbury.ac.nz*

The Evening Sky Map for September 2024



Evening sky in September 2024

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 clockwise rotation each night as we orbit the sun.

Venus is the brilliant 'evening star', appearing soon after sunset and setting two hours after the Sun. Saturn is a cream-coloured 'star' midway up the eastern sky. West of overhead is orange Antares marking the Scorpion's body. The Scorpion's tail curls above it like a back to front question mark. Arcturus twinkles red and green as it sets in the northwest. Crux, the Southern Cross, and the Pointers are in the south-west. Canopus twinkles like a diamond near the southern horizon. Vega shines on the north horizon. The Milky Way spans the sky from north to south.

The Evening Sky in September 2024

Venus is the brilliant 'evening star', appearing in the west soon after sunset. It sets around 8 pm at the beginning of the month and around 10 pm NZDT at the end. The Moon will be close to Venus on the 5th.

Spica, the brightest star in Virgo, will be near Venus on the 19th. Saturn is the only other naked-eye planet in the evening sky. It looks like a medium-bright star midway up the eastern sky.

Any telescope will show the planet and its ring. The ring is nearly edge-on, so

Saturn looks like a ball with a spike through it. Titan, Saturn's biggest moon, is in an orbit that goes out to five ring-diameters each side of the planet. Since we are looking at Titan's orbit nearly edge-on, it can appear close to the planet. It will be near Saturn on the 2nd, 10th, 18th and 26th. Saturn is at its closest for this year: 1,300 million km away.

The Moon will be near Saturn on the evening of the 17th.

Bright stars shine around the skyline. Arcturus is in the northwest, setting early. Canopus, the brightest star in the sky (not counting Venus), skims along the southern skyline.

Both stars are shining through a lot of air which makes them twinkle colourfully. Canopus, being white, shows all colours like a diamond. Orange Arcturus twinkles red and green. Canopus is

matched on the northern skyline by Vega, the second-brightest northern star after Arcturus. From northern Aotearoa the star Deneb can be seen near the north skyline. It is the brightest star in Cygnus the Swan. Orange Antares, northwest of the zenith, marks the body of the Scorpion.

The Scorpions tail hooks toward the zenith like a back-to-front question mark. It is the fishhook of Maui in Māori star lore. Below or right of the Scorpion's tail is the teapot made by the brightest stars of Sagittarius. It is upside down in our southern hemisphere view.

Midway down the southwest sky are The Pointers, Beta and Alpha Centauri. They point down to Crux the Southern Cross. Alpha Centauri is the third brightest star. It is also the closest of the naked-eye stars, 4.3 light-years* away. Beta Centauri, along with most of the stars in Crux, is a blue-giant star hundreds of light-years away.

Above and right of Saturn is the medium-brightness star Fomalhaut, marking the Southern Fish. Further right, in the southeast, is Achernar. It is the same brightness as Saturn and the third brightest of the stars in the south after Canopus and Alpha Centauri.

The Milky Way spans the sky from north to south. It is brightest and broadest overhead in Scorpius and Sagittarius. In a dark sky it can be traced down past the Pointers and Crux into the southwest. To the northeast it passes Altair, meeting the skyline right of Vega. 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, 27 000 light years away, is in Sagittarius. Dust clouds near us appear as gaps and slots in the Milky Way. Binoculars show many clusters of stars and some glowing gas clouds in the Milky Way. The Large and Small Clouds of Magellan, LMC and SMC, look like two misty patches of light in the south sky. They are easily seen by eye on a dark moonless night. They are galaxies like our Milky Way but much smaller. The LMC is about 160 000 light years away; the SMC about 200 000 light years away.

On moonless evenings in a dark sky the Zodiacal Light is visible in the west. It appears as a faint broad column of light extending up past Venus and Spica and toward Antares. It is sunlight reflecting off meteoric dust in the plane of the solar system.

Jupiter is in the morning sky (so not on the chart.) It rises after 2 a.m. at the beginning of the month and around 1:20 NZDT at the end. By dawn it is in the north, the brightest 'star' in the morning sky. It shines with a steady golden light. Mars rises about an hour after Jupiter. It looks like a medium-bright orange star. The Moon will be below Jupiter on the 24th and below Mars on the 26th.

*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.

*Notes by Alan Gilmore, University of Canterbury Mt John Observatory,
P.O. Box 56, Lake Tekapo 7945, New Zealand.
www.canterbury.ac.nz*

CAS COMMITTEE AND OFFICERS 2022/2023

Public Group Bookings		bookings@cas.org.nz
President:	Simon Lewis	president@cas.org.nz
Vice President:	Terry Richardson	vice.president@cas.org.nz
Treasurer:	David Brian	treasurer@cas.org.nz
Secretary:	Mandy Heslop	secretary@cas.org.nz
Observatory Director:	Brent Schroeder	observatory.director@cas.org.nz
Editor:	Dale Kershaw	editor@cas.org.nz
Membership Secretary:	Dale Kershaw	membership@cas.org.nz
Librarian:	Sean Mullis	librarian@cas.org.nz
Web Master:	Orlon Petterson	casweb@cas.org.nz
Committee Members:	Marc Bunyan	member1@cas.org.nz
	Gary Steel	member2@cas.org.nz
	Ray Pointon	member3@cas.org.nz
	Neil Heslop	member4@cas.org.nz

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

CAS Contact Information

Canterbury Astronomical Society Inc.

PO Box 25-137

Christchurch 8140

Web: www.cas.org.nz

Canterbury Astronomical Society Facebook 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* meetings are currently held from 7.30pm onwards every third Tuesday of the month (except December and January) at the University of Canterbury, Room ER225 Ernest Rutherford Building (2nd floor)

CAstronauts Meeting's are 6.30-7.30, in the same venue on the same night (3rd Tuesday of the month)

Any member of the public who is considering in joining the society are most welcome to attend the meetings.

Members Nights at the Observatory are detailed on our website

Observatory Members Nights:

Cas holds these nights as follows

Members Nights (General) on the 3rd Saturday of the month after the Tuesday Members meeting at UC, (be aware some months it is the 4th Saturday, depending on the start of the month) check the website for details

CAS on Facebook:

Cas has a Facebook presence, Useful to keep up to date with events, interesting articles, asking for advice, For members please use the website forums for more detailed information etc

CAS Membership:

Subscriptions are due 1st April each year

Fees for current members shown on the membership form included on the back page of your Casmag,

Full details are included on our website.

Contributions to CASMAG:

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

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

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

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

Charges for larger items range from \$5 to \$40, email the editor for more details.

The Constitution of The Canterbury Astronomical Society Inc:

This is available on request, Please ask for a copy if required

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.

APPLICATION FOR MEMBERSHIP



To: Membership Secretary
Canterbury Astronomical Society Inc.
PO Box 25137
Christchurch 8140

Applicants Name in Full _____

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, subscripton must accompany application*)

Online Banking Details (Please identify your payment): 03 0802 0098273 00

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

Name:	Date of Birth(if Under 18yrs)	Signature

All CAS members receive CASMAG a monthly newsletter,

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 Inc.

Date Approved: _____