



CAS MAG

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. Our meeting venue is room ER225 in the Ernest Rutherford building at Canterbury University. Level 2 Refreshments from 7.30pm Meeting starts at 8pm

Welcome to 2023:

Meetings start again in February and details are on page 5. Lets hope this coming year is an improvement on the last 2 and we have many more clear skies/nights.

FEBRUARY MEMBERS MEETING Guest Speaker: BOB EVANS

Topic: 65 years with CAS

MARCH MEMBERS MEETING CAS AGM 2023

Full reports will be presented along with the election of your next committee

2022 ANNUAL SUBSCRIPTIONS/MEMBERSHIP

MEMBERSHIP

Payment for the 2022 Year is now WELL OVERDUE and can be paid via internet banking, PayPal, cash in person,

Please use your name and member number for your reference when making payment, (this means it can be matched to your membership)

Also the committee asks you to PLEASE advise any change to your details: Address, Phone Number, email,

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

Your 2023 membership is due for payment from 1st April 2023



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From Your Editor

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,
(email editor using editor@cas.org.nz)

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

Dale Kershaw

From 7.2.4.6 on page 15 of Constitution of the Society

"Any member wishing to have an article or paper published in CASMAG or other publications of the society shall in the first instance, forward a copy to the editor who may request the approval of the committee before publication."

DISCLAIMER:

This newsletter is for general information purposes only. The views expressed herein are not necessarily those of the Canterbury Astronomical Society Inc (CAS)

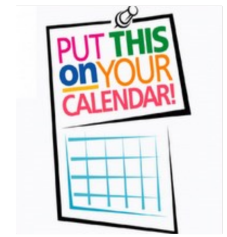
CAS has taken all reasonable measures to ensure that the material contained herein is correct, but gives no warranty for, and accepts no responsibility for its accuracy or completeness.

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.

CAS Calendar FEBRUARY-MARCH 2023

FEBRUARY 2023

Saturday 4th	New Members Night @ Observatory from 5pm
Monday 6th	Waitangi Day Full Moon
Tuesday 14th	Committee Meeting Last Quarter
Friday 17th-	
Sunday 19th	Stardate South Island
Monday 20th	New Moon
Tuesday 21st	CAStroNauts @ University 6-30—7.15pm Members Meeting @ University from 7.30pm
Saturday 25th	Members Night @ Observatory from 6pm
Monday 27th	First Quarter



MARCH 2023

Saturday 5th	New Members Night @ Observatory
Wednesday 8th	Full Moon
Tuesday 14th	Committee Meeting
Wednesday 15th	Last Quarter
Tuesday 21st	CAS AGM @ University
Wednesday 22nd	New Moon
Saturday 25th	Members Night @ Observatory
Wednesday 28th	First Quarter

2023 Open Night Season

Its not that far away until open night season will be upon us

The 2023 Open night season will start after daylight saving starts on 2nd April 2023
The 1st public night will be 14th April 2023 (as the weekend prior is Easter Weekend)

Helping at the Public nights is very rewarding and a great opportunity to work towards accreditation on the telescopes We look forward to next years season and hope the weather etc is suitable to being open for as many nights as possible

Kids Fest Nights will be announced early in the new year.
Keep and eye on the website and email notices for more updates.

2023 KIDSFEST NIGHTS

Dates are yet to be confirmed from the Christchurch City Council but from my calendar it will be 1st-16th July including Matariki on the 14th July except the 2nd Tuesday night (11th) more information as it come to hand, and as always we will be looking for our amazing volunteers in helping for these night

IMPORTANT UPDATE FROM YOUR COMMITTEE

Covid-19 level Operations

Public Open Nights: These have finished for this year

CAS Events At the UC:

We are now back to using our room at the University for our monthly Meetings Room ER225, (finished for this year start again 21st Feb 2023)

Training nights and Members nights at the observatory have restarted on our normal Saturday nights, 1st Saturday and the Saturday following the Tuesday members meeting (*check the website for these nights over the holiday season*)

Observatory Use. Do not visit the observatory if unwell.

If you intend to remain outside and not enter the lodge at anytime then there is no requirement to enter the lodge to sign the logbook. If you wish to wear a mask please do so.

Please maintain your hygiene as per our past suggestions, Wash / sanitise hands using the gear provided. Do not clean optics as the sanitising chemicals can cause damage to equipment. Please follow the rules at the observatory if visiting, and please stay safe

SOUTH ISLAND STARDATE 2023

SI Stardate is booked for the weekend of
17th-18th-19th February 2023

Bookings are now open on the Stardate website

<http://www.treesandstars.com/stardate/>

Special Guest: "Amadeo"

REGISTRATION FEES: \$25 per night per adult,

\$5 per night for 5-16 year olds,

and free per child under 5 years.

The is no extra charge for a caravan point.

Keep up to date by following the Stardate SI face book page.

Day Visitors welcome \$10 per person

<https://www.facebook.com/profile.php?id=100063786623600>



Family's very welcome

Bookings are still open for this, Book early,

We still require you to register/book if you are Using a Tent/Caravan/Camper, as we need to know numbers so we can plan accordingly.

Speakers this year include:

Ryan Ridden-Harper, Sacha Crawford, John Pickering, Sam Leske, Hari Mogasuna, Euan Mason, Phil Barker, Graham Townsend, Rob Glassey, Ray Pointon plus Our Guest Amadeo and others

(Sorry there is NO DOG policy on site)

MONTHLY MEETINGS:

Meeting Venue:

**Room ER 225 in the Ernest Rutherford Building, University of Canterbury,
(1 building over from the east building we used last year)
Entrance to the building will be via the north side entrance,
Then using the lift or stairs up to level 2**

**Carol McAlavey is asking you, our members to make suggestions or offer
to give a talk at our monthly meetings.**

**PLEASE CONTACT CAROL WITH YOUR SUGGESTIONS OR IF YOU CAN GIVE
A TALK via member2@cas.org.nz**

Upcoming Members Meeting Dates:

21st February: Bob Evans: 65 years with CAS

21st March: CAS AGM

18th April:

16th May:

20th June:

18th July:

15th August:

19th September:

17th October:

21st November:

(correct as at 15th November 2022, 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

**We will update the website if there are any changes and
will host meetings via ZOOM if possible:**

For Sale:

New (unopened) Benro GoPlus Travel tripod kit (FGP28A+B2 head),
\$425 (\$598 @ Photo Warehouse).

New Tenba Fulton 16l Photo Backpack (tan/olive),
\$175 (\$258 @ Photo Warehouse).

If interested please contact Markus on 021 1615 194.



OBITUARY FOR IAN CRUMPTON

It is with deep sorrow that the Canterbury Astronomical Society announces the passing of our long-time members, the Reverend Ian Crumpton On 7th December 2022.

Ian had been ill for a number of months but despite all the treatment he slipped away surrounded by his family. I have known Ian for all his time here in Canterbury when he moved here after living in Dunedin and joined our Society. I remember joining him on a number of committees when he was President and his greatest asset was being such a calm and steady presence when called for.



He was also instrumental in helping out a lot during the winter months when we opened our observatory to public viewing. As we all know, the weather doesn't always play its part in ensuring good viewing, and Ian put together a cloudy skies programme so that the public could at least come out and see our observatory and still learn a lot from those talks. Ian was also part of a programme recording meteors along with others in the South Island and his research was invaluable to others.

One of the things that stood out for me at his memorial service was how accomplished he was in many different fields. As his obituary in the paper said, he was a Liberal Theologian, Philosopher, Bard, Astronomer, Musician, Artist, Environmentalist, and many people spoke of how he inspired them in what they were interested in.

I was especially impressed by how good a musician he was, as some of his arrangements were played at the service.

Ian will be sorely missed by all who knew him and called him a friend.

Carol McAlavey,

Copied from Rasnz newsletter

Photo: Google images

CAS MERCHANDISE

Cas branded items for sale *See Page 13 for ordering details*
Coffee Mugs are \$15.00 each



NEW STYLE OF CAS PENS NOW AVAILABLE IN 2 STYLES \$2.50



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



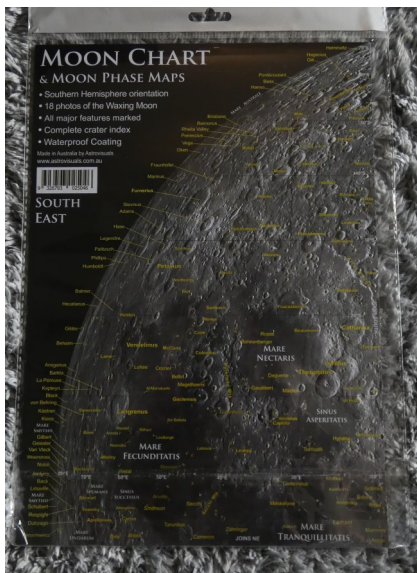
STAINLESS DRINK BOTTLES: \$15.00 with flip top 750ml



2023 CAS COSMIC CALENDAR: \$15.00
 All new 12 photos taken by our Own CAS Members



MOON CHART \$15.00 8 sheets showing Moon phase maps, with waterproof coating.



DOUBLE -SIDED PLANISPHERE FOR SOUTHERN HEMISPHERE
\$20.00



~~SUN-DISK KIT, \$25.00~~

~~Make a sundial at home~~

Sold out but we can order more if enough interest
 Contact Dale



CANTERBURY ASTRONOMICAL SOCIETY 75TH ANNIVERSARY 2023

On 20 July 2023 it will be 75 years since the first meeting of the Canterbury Astronomical Society was held.

This will be a special year for us and it is something to celebrate so I am asking for ideas, thoughts, volunteers, for how we can make this awesome!

There are some people who are going to be doing a few poster papers for the RASNZ Conference in Auckland next year and they are looking for old reports and memories of people who were among the first members of our Society, so please dig through that treasure box and delve into those memories and see what we can produce.

Also, please think about attending the RASNZ Conference next year as I believe that CAS' 75th Anniversary will be acknowledged and it will be fantastic to have a few people to help us celebrate. One of the projects I am looking to do for the Anniversary is to collate the history of the Clive Rowe Memorial dome and the telescopes that have been in there so that future members will have a "cheat sheet" to refer to when asked about its history.

I have become aware that there is not many members around who knew that there were two telescopes that have been in that dome.

I thank you in advance for your assistance.

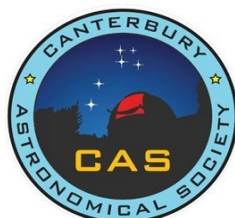
Carol McAlavey

cstars@xtra.co.nz

CANTERBURY ASTRONOMICAL SOCIETY INC

1948-2023

75 Years Anniversary



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 Then contact Terry or Simon.

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

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

OBSERVATORY NEWS IMPORTANT INFORMATION

DOOR CODE & ALARM AT THE OBSERVATORY

The Door code and Alarm code 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 Kieren (our Observatory directory via his email listed on our website or the inside back page casmag

Comet ZTF (C/2022 E3) BRIGHT GREEN COMET IS COMING

FROM University of Canterbury Mt John Observatory facebook page

A bright (green) comet is coming!

Comet ZTF (C/2022 E3) was discovered on March 2, 2022 at magnitude 17 and is named for the Zwicky Transient Facility.

It is currently in the northern sky at magnitude 6.5-7 and is predicted to brighten to visual magnitudes of about 5.5-6.0 around late January/early February.

The attached image shows Comet ZTF (C/2022 E3) with a bright, fan-shaped dust tail and an ion tail more than 4° long

on January 12, 2023 (Michael Jaeger/Sky and Telescope).

The blue-green colour comes from green-glowing diatomic carbon (C₂) evaporating off the comet.

A southern hemisphere finding chart (for 35 degrees south) is also attached (courtesy Bob King/Sky and Telescope).

With an inclination of 109°, Comet ZTF E3's orbit is steeply tilted to the plane of the planets.

It's headed southward in January and will cross the ecliptic plane on February 12th (image:NASA HORIZONS/Sky and Telescope)

The comet came from the Oort Cloud at the edge of our Solar System.

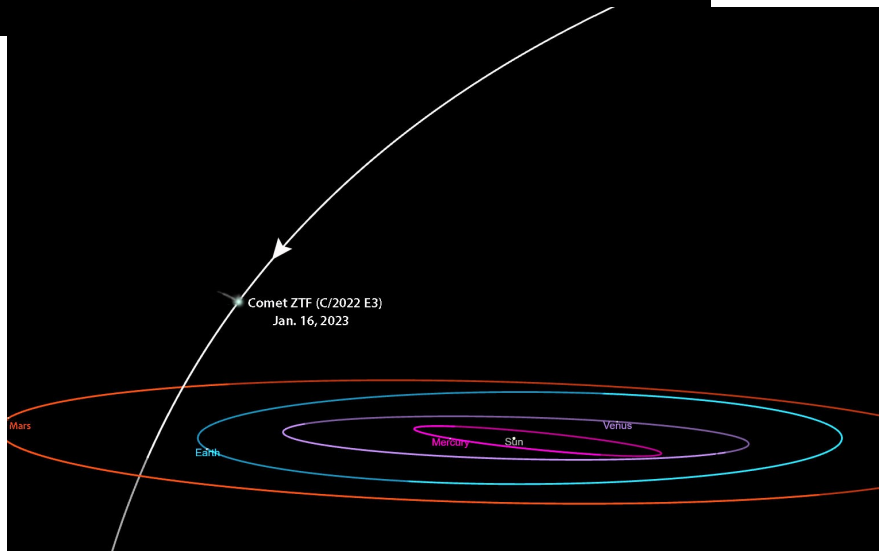
The comet's closest approach to Earth occurs on February 1st at 42 million kilometers away. Perihelion (closest approach to the Sun) occurred on January 12th at 166 million kilometers.

While its inbound period was 53,000 years, due to perturbations by the planets comet ZTF is now headed out of the solar system altogether.

Bye Bye Comet ZTF (C/2022 E3)!



Comet ZTF (C/2022 E3) BRIGHT GREEN COMET IS COMING *cont*



ASTRONOMY 2023 CONJUNCTION DATES

Conjunctions occur when the Moon, a star or planets appear near each other in the sky from our earthly point of view. In keeping with our 'best-of-the-best' doctrine, here are the closest (less than one degree, or two full-moon widths apart) conjunctions for 2023.

Conjunctions — The Planets

The planets continue their celestial clockwork dance in 2023 as well. The very best time to observe the inner planets (Mercury and Venus) is when they're near greatest elongation and farthest from the Sun in the dawn or dusk sky, while outer planets are best near opposition, when they rise in the east as the Sun sets in the west, dominating the sky for the entire night.

-Best (naked eye)

-Closest planet versus bright star: Mercury-Regulus (July 29th) 6' apart

Other close conjunctions of planets and bright stars in 2023 include:

January 22nd: Venus 18' from Saturn.

February 15th: Venus less than 1' (!) from Neptune.

March 1st: Venus 30' from Jupiter.

March 2nd: Mercury 54' from Saturn.

July 10th: Mars 36' from Regulus.

July 29th: Mercury 6' from Regulus.

October 29th: Mercury 18' from Mars.

Source: [https://](https://www.universetoday.com/159049/astronomy-2023-top-sky-watching-highlights-for-the-coming-year/)

www.universetoday.com/159049/astronomy-2023-top-sky-watching-highlights-for-the-coming-year/

**“Lets keep looking up and remember to tell others
what and when you saw it”**

Cheers Dale

[Petition of John Hearnshaw: New Zealand needs a national law to limit light pollution and promote dark skies](#)

I recently launched a petition on dark skies to the New Zealand parliament. The petition calls for national legislation to protect dark skies to be introduced in the House.

You can read the petition here https://www.parliament.nz/en/pb/petitions/document/PET_130407/petition-of-john-hearnshaw-new-zealand-needs-a-national.

I am asking friends and colleagues to sign the petition on-line, simply by adding their name and email address. Anyone in Aotearoa or even overseas can sign, and already nearly 600 people have done so. I would be grateful if you could sign yourself and then forward this to [all members of the Canterbury Astronomical Society](#). I think there is much to gain from dark skies, especially for astronomers, stargazers and astrotourists.

The petition itself is very brief, as there's a strict limit on its length. The attached document of background information gives the real reasons for starting this petition and what the benefits will be.

The petition runs until 20 April 2023 and after that it goes to the Petitions Select Committee and then should be presented in the House.

Many thanks for your support.

Nga mihi

John

*Editor Note: I am not sure if the links in the above work from the copied item so here they are:
(you might need to type this into your browser)*

Petition Information and brief outline:

https://www.parliament.nz/en/pb/petitions/document/PET_130407/petition-of-john-hearnshaw-new-zealand-needs-a-national

To Sign the Petition :

https://www.parliament.nz/en/petitions/sign/PET_130407

2023 CAS CALENDAR

Our Cas 2023 Calendar is now available
 Our thanks to those who kindly submitted photos.
 All photos included in this calendar have been taken by our own
 CAS members
 Calendars \$15 (plus postage if required)
 You can pick up your copy from either
 Simon or Dale
 Simon—vice.president @cas.org.nz
 Dale—editor@cas.org.nz
 or ph 027 2426376



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

I have the full sizing charts on hand so you can make sure you are 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



RASNZ's Globe at Night Citizen Science Campaign

I am writing to ask your help with a campaign to protect NZ's natural night skies.

Please find attached updated details on RASNZ's Globe at Night Citizen Science Campaign during 12th-21st February 2023.

This can be undertaken by anyone from their backyards using a smart phone with all the details clearly provided in the 3-min video in the attached promotional note.

In addition, RASNZ will be running a Facebook live event on 17 February to encourage and support participation.

Measurements taken from cities are considered particularly valuable compared to dark sky places which don't really experience light pollution problems and the growth in light pollution is a very slow process unlike in the cities.

CAS members will be familiar with Globe at Night campaigns. In 2020, there were 50 readings from Christchurch and the areas of 200 km around it. In 2021 it dropped to 1 and in 2022 back up to 51.

Data from NZ's 3 big cities - Auckland, Wellington and Christchurch - is most valuable and both AAS and WAS are supporting this campaign within their constituency and I trust CAS will too.

I would appreciate very much if CAS can get in behind this simple to achieve campaign and contribute to the cause of

- establishing a reliable and up-to-date baseline for the light pollution issues in NZ, and

- having data we can work with to abate light pollution and for dark skies advocacy

Having high participation and the information gathered will help the current petition underway - see details on <https://www.rasnz.org.nz/dark-skies-group/dark-skies-petition>

Presumably, CAS is promoting this petition too.

Thank you in advance for your support.

Nalayini (RASNZ President)

More information is on the next page and our website

RASNZ Register of Observatories in NZ New Zealand Observatories

A combined Australia and New Zealand Standard **AS/NZ 4282 Control of obtrusive effects of outdoor lighting** contains guidance which will help to protect observatories from outdoor lighting at night.

When your observatory is listed here, local council planners will be able to see your need to limit obtrusive lighting around your observatory.

The standard can be purchased from Standards New Zealand:

<https://www.standards.govt.nz/shop/asnzs-42822019/>

The Standard states that a list of observatories will be held by the Royal Astronomical Society of New Zealand - that's us!

If you wish to have your observatory included in this list please send your contact and location details. Your observatory will be included with the level of information you choose to display.

observatory@rasnz.org.nz

If you wish to limit contact information on this page you may include the previous email link for people to contact us. We will then forward enquiries to you to deal with.

Observatories will be grouped into Research, Community and Private or Personal categories.

Globe at Night Citizen Science Campaign

The Royal Astronomical Society of New Zealand welcomes you to join us on the Globe at Night campaign and help us map the impact of light pollution in New Zealand which will help us understand and manage the issue of light pollution both in New Zealand and globally.

All you need is a smartphone (tablet or computer) to measure and submit night sky brightness observations from wherever you are.

Readings from locations experiencing light pollution are particularly encouraged. Your contribution plays an important role in the fight against light pollution providing scientists with much larger and more diverse data sets that might have otherwise been unachievable.

For New Zealand, we'd like to focus on February (12th-21st using the Orion constellation) and June (9th – 18th using the Southern Cross constellation).

How to Participate:

During the campaign dates, go outside on a clear night more than an hour after sunset and let your eyes adjust to the dark (at least 10 minutes).

Find the constellation you are reporting on – Orion and Southern Cross are the two best known and easy to identify constellations in New Zealand. Many smartphone apps or programs can help you locate it if you are unsure where it is.

The 3-minute video below will show you how to go to the Globe at Night report page (making sure you are in nighttime mode), choose the star chart that most closely matches what you see in the sky, Select the amount of cloud cover at the time of your observation and submit your data

<https://vimeo.com/user154165690/gan-rasnz>

Password: GAN

Why we collect this data

Another 3-minute video explains why we collect this data and how valuable your contribution is.

<https://vimeo.com/user154165690/whycollectdata>

Password: GAN

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RASNZ Contacts:

Antony Gomez

Steve Butler

Emily Barraclough

Globe at Night website

More detailed instructions here.

Join us on Facebook live for an event featuring the Globe at Night Citizen Science Program. We will show you how to observe and record light pollution levels in your area. Not only will you learn about the impact of light pollution on our environment, but you'll also have the opportunity to contribute to vital scientific research. Mark your calendars and tune in to our Facebook page on Friday 17th February 9:30 pm (raincheck date 19th February) for our first live Citizen Science event.

See you there!

We would like to thank the following
sponsors for their generous donations
to our 2022 Fund Raiser

JACOBS DIGITAL
EST. 1982

<https://www.jacobsdigital.co.nz/>

EXPLORE[®]
SCIENTIFIC

<https://explorescientificusa.com/>



<https://www.photowarehouse.co.nz/>

**ASTRONZ**

<https://astronz.nz/>

Remember to mention you are a CAS Member when ordering

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.

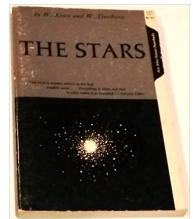
This Months Books for Adoption are:

1: Galactic Nebulae and interstellar matter by Jean Dufay

2: The Stars by W.Cruuse & W. Dieckvoss

3: Scientific American Amateur Telescope Making Book 1

4: Scientific American Amateur Telescope Making Book 3



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

We will publish a new list each month for adoption

As we have had many generous donations of books over the years to avoid double ups and disappointment.

Please note if you or your family wish to donate books please contact Sean before hand, so he can advise the best plan for this.

Email Sean @ librarian@cas.org.nz

QUOTES OF THE MONTH

“An open mind leaves a chance for someone to drop a worthwhile though in it” *Mark Twain*

“Only when you are standing still, time is against you” *Anonymous*

“Every one of us is, in the [cosmic](#) perspective, precious. If a human disagrees with you, let him live. In a hundred billion galaxies, you will not find another.”

Carl Sagan

Quotes sourced from RASNZ Newsletter and Google search

LIBRARY CORNER cont BOOK REVIEW

Welcome to the BOOK REVIEW Page

Starting this month I am asking for book reviews from our members.

It only needs to be several lines, but mostly about some of its content and your thoughts,

Please email them to editor @cas.org.nz

We kick this off with this from *Terry Richardson*

One Way By S J Morgan

(Library list 813 MOR)

This is a science fiction novel combined with a murder mystery.

Eight astronauts selected from life imprisonment are offered work setting up a base on Mars in return for eventual freedom.

One dies in an apparent accident, then others follow, until it is clear that murder is involved.

As the story unfolds more deaths occur and a conspiracy unfolds.

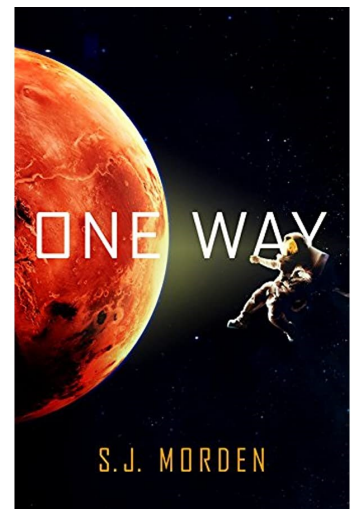
This is an unusual book for the library as unlike the vast majority, it is not a scientific book but a work of fiction.

It is not bad science fiction, made more interesting by adding murder mystery to the story line.

The two genres mix to make a reasonably well crafted yarn.

For those who like science fiction it is an entertaining read but with the mystery added makes for a good light read with an unexpected twist at the end. It is well worth picking up.

So please send in some reviews to be published, we have fantastic library out at the observatory and its there for you the members to make the most of.



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

Kieren Eden





Supporting Astronomy Education

Online Courses 2023

“Scared of Physics or Maths? You won’t be after this.”
For all ages and backgrounds. Also ideal for homeschoolers.

Exploring the Solar System

Thorough Introduction into Solar System Astronomy.

Eight weeks, 2-hour weekly Zoom sessions, starts 14 February 2023.

How it started and evolved, Orbits and Weightlessness, The Sun and principles of Nuclear Fusion. The Planets, Moon systems, special focus on Mars, Dwarf Planets, Asteroids, Comets and Extra-Solar visitors. Past, current and future Space Missions, Astrobiology and where we search for life.

More than 200 pages of supporting handouts with links to background information for self-study. Video recordings of all sessions will be made available to participants.

Non-Commercial, Non-Profit and therefore very affordable.

Full details and Enrolment information [here](#).

<https://oxford.ngawhetu.nz/index.php/online-courses>

Later this year

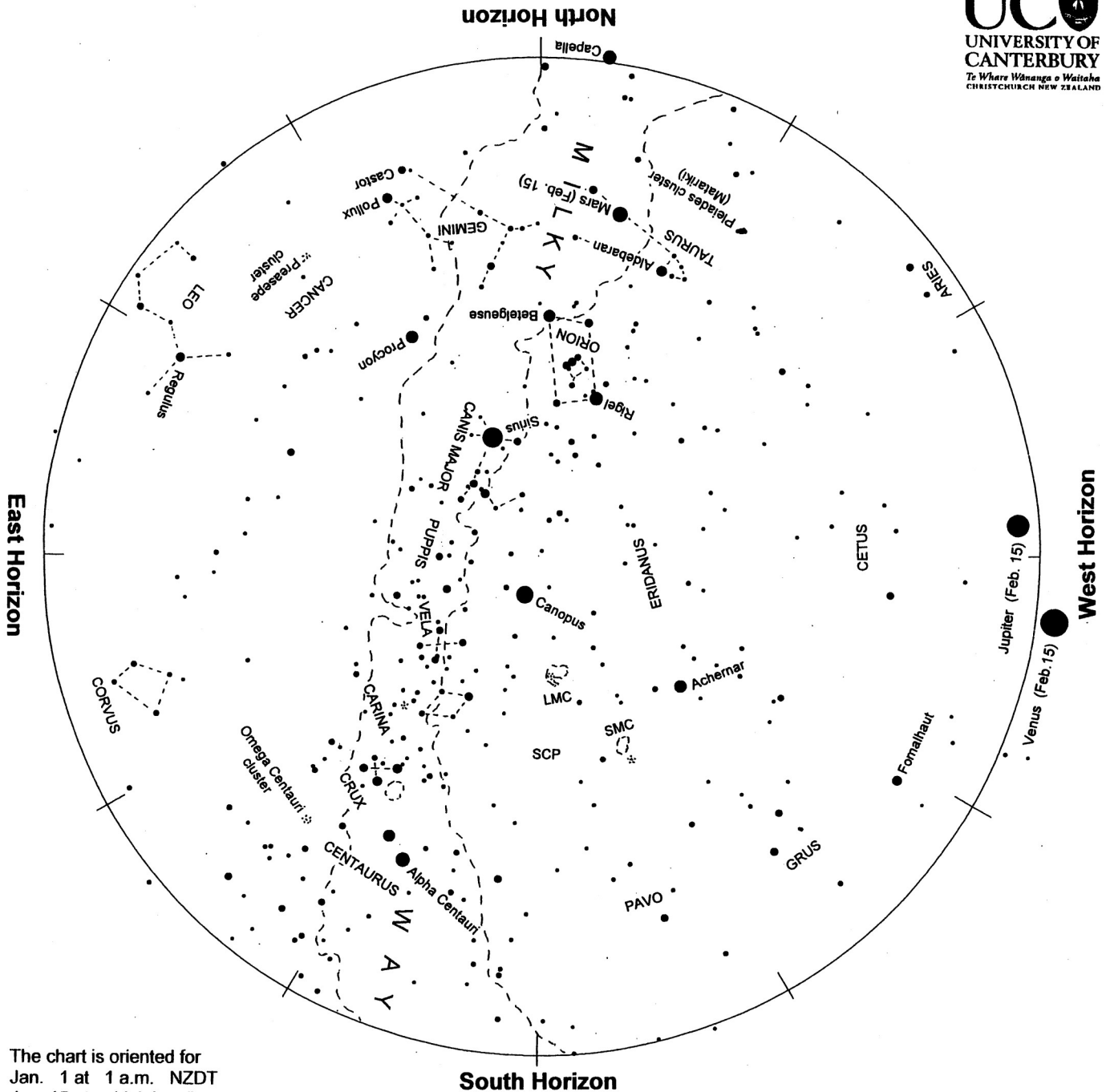
Exploring the Universe

Three course programme, in total 21 weeks, 2-hour weekly Zoom sessions, starts 9 May and ends 5 December 2023.

Detailed exploration all the way to the edge of the observable Universe and a non-mathematical comprehensive introduction into Cosmology. Lots of basic but comprehensive Physics along the way,
Nature of Light, Electro-Magnetism, Spectroscopy, Special and General Relativity.

From Erik Vermaat

Evening Sky in Map for February 2023



The chart is oriented for
Jan. 1 at 1 a.m. NZDT
Jan. 15 at midnight "
Feb. 1 at 11 p.m. "
Feb. 15 at 10 p.m. "

Evening sky in February 2023

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.

Venus and Jupiter are the 'evening stars', low in the west and setting early. Mars is a medium-bright orange-red 'star' low in the north. Sirius, the brightest true star, appears north of overhead at dusk. Canopus, the second brightest star, is south of the zenith. Orion, containing 'The Pot', is midway up the north sky. Below and left of Orion are Taurus and the Pleiades/Matariki star cluster, well left of Mars. The Southern Cross and Pointers are midway up the southeast sky. The Clouds of Magellan, LMC and SMC, two nearby galaxies, are high in the south sky.

The Evening Sky in February 2023

Venus and Jupiter are the 'evening stars', both low in the west. Brilliant Venus sets 70 minutes after the Sun through the month. Golden Jupiter sets more than two hours after the Sun at the beginning of the month but sinks steadily lower night to night.

At the end of February Jupiter will be near Venus. The thin crescent Moon will be beside Venus on the 22nd and above Jupiter on the 23rd .

We are moving to the far side of the Sun from Jupiter, hence its steady fall in the west.

It is 840 million km away mid-month. Venus, on the inside track, is slowly catching up with us.

As it does so it will move higher in the evening sky till June. After that it will fall lower as it passes between us and the Sun.

Mars is a bright orange-red 'star' low in the sky a little west of due north. Above it are the orange stars Aldebaran, fainter than Mars, and Betelgeuse, similar in brightness to Mars. We are leaving Mars behind so it is fading. At mid-month it is 150 million km away.

The Moon will be near Mars on the 28 th .

Sirius and Canopus are the brightest true stars. Sirius, the brightest of all the stars, is north of overhead. Canopus, the second brightest star, is a bit south of overhead. Both stars are white in colour. Sirius, "the Dog Star" marks the head of Canis Major the big dog. A group of stars above and right of it make the dog's hindquarters and tail, upside down. Procyon, in the northeast below Sirius, marks the smaller of the two dogs that follow Orion the hunter across the sky. Sirius is 8.6 light years* away.

Below and left of Sirius are bluish Rigel and orange Betelgeuse, the brightest stars in Orion.

Between them is a line of three stars: Orion's belt. To southern hemisphere star watchers, the line of three makes the bottom of "The Pot" The handle of The Pot is Orion's sword, a fainter line of stars above the bright three. At its centre is the Orion Nebula; a glowing gas cloud around 1300 light years away.

Orion's belt points down and left to the orange star Aldebaran. Continuing the line finds the Pleiades or Matariki star cluster, well to the left of Mars. Aldebaran makes one eye of Taurus the bull. It is on one tip of an upside-down V of stars making the face of Taurus. These constellation pictures were thought up by northern hemisphere folk so are upside down to us.

The V-shaped group is called the Hyades cluster. It is 130 light years away. Aldebaran is not a member of the cluster but merely on the line of sight, 65 light years from us. It is a red-giant star 145 times brighter than the sun. The Pleiades/Matariki star cluster is also known as the Seven Sisters and Subaru among many names. The cluster is 440 light years from us.

From northern Aotearoa the bright star Capella is on the north skyline. It is 90,000 times brighter than the sun and 3300 light years away.

Crux, the Southern Cross, is in the southeast. Below it are Beta and Alpha Centauri, often called "The Pointers" Alpha Centauri is the closest naked-eye star, 4.3 light years away. Beta Centauri is a blue-giant star hundreds of light years away, as are most of the stars in Crux. Canopus is also a very luminous distant star; 13 000 times brighter than the sun and 300 light years away.

The Milky Way is brightest in the southeast toward Crux. It can be traced up the sky, fading where it is nearly overhead. It becomes very faint east, or right, of Orion. The Milky Way is our edgewise view of the galaxy, the pancake of billions of stars of which the sun is just one.

The Clouds of Magellan, LMC and SMC are high in the south sky, easily seen by eye on a dark moonless night. They are two small galaxies about 160 000 and 200 000 light years away.

Mercury is in the morning sky, rising in the southeast around 4:30 a.m. at the beginning of the month. It is a lone bright 'star' in an empty region of sky. The thin crescent Moon will be above Mercury on the morning of the 19th .

*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 221123

CAS COMMITTEE AND OFFICERS 2022/2023

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Vice President:	Simon Lewis	vice.president@cas.org.nz
Treasurer:	David Brian	treasurer@cas.org.nz
Secretary:	David Brian	secretary@cas.org.nz
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Librarian:	Sean Mullis	librarian@cas.org.nz
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	Terry Richardson	member1@cas.
	Preetha Sreedharan	member3@cas.org.nz
	Goran Balvan	member5@cas.org.nz
	Orlon Petterson	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 (Training) on the 1st Saturday of the month

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.

Canterbury Astronomical Society Inc

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

	Full
<input type="checkbox"/> Adult (any person 18years of age or over who is not eligile for any other category)	\$70
<input type="checkbox"/> Family (two or more persons living at the same address)	\$105
<input type="checkbox"/> Junior (under 18 years of age on 1st April in the current year)	\$35
<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: _____