



# CASMAG

The official magazine of the Canterbury Astronomical Society

[www.cas.org.nz](http://www.cas.org.nz) [www.facebook.com/CanterburyAstronomicalSociety](https://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

## MARCH MEMBERS MEETING ANNUAL GENERAL MEETING 21st MARCH 2023

This is your opportunity to hear how our society has functioned this past year and hear the reports from Office Holders of the committee.

Then the Election of the 2023 Office Holders and the full Committee, Come along to make your vote count, Refreshments from 7.30pm with meeting to start at 8pm.



## 2023 ANNUAL SUBSCRIPTIONS/MEMBERSHIP

Payment for the 2023 Year is now DUE

**MEMBERSHIP**

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

**If you have not paid your 2022 membership it is NOW VERY OVER DUE**

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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,  
 Any questions, Ideas or suggestions please email to [editor@cas.org.nz](mailto: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)*

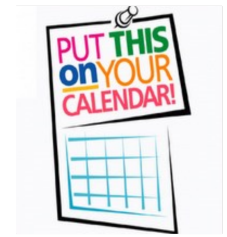
*CAS has taken all reasonable measures to ensure that the material contained herein is correct, but gives no warranty for, and accepts no responsibility for its accuracy or completeness.*

*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 MARCH-MAY 2023

### MARCH 2023

Saturday 4th	New Members Night @ Observatory
Wednesday 8th	<i>Full Moon</i>
Tuesday 14th	Committee Meeting
Wednesday 15th	<i>Last Quarter</i>
Tuesday 21st	CAS AGM @ University
Wednesday 22nd	<i>New Moon</i>
Saturday 25th	Members Night @ Observatory
Sunday 26th	<b>West Melton Fete 10am-3pm</b>
Wednesday 28th	<i>First Quarter</i>



### APRIL 2023

Saturday 1st	New Members Night @ Observatory
Sunday 2nd	<b>Daylight Saving Changes @ 3am back to 2am</b>
Thursday 6th	<i>Full Moon</i>
Friday 7th	<b>Good Friday/ Easter Weekend starts</b>
Saturday 8th	<b>Holy Saturday/ Easter Saturday</b>
Sunday 9th	<b>Easter Sunday</b>
Monday 10th	<b>Easter Monday</b>
Tuesday 11th	Committee Meeting
Thursday 13th	<i>Last Quarter</i>
Friday 14th	Public Open Nights Start (Friday nights until 22/9/23)
Tuesday 18th	Members Meeting @ University
Thursday 20th	<i>New Moon</i>
Saturday 22nd	Members Night @ Observatory
Tuesday 25th	<b>Anzac Day</b>
Friday 28th	<i>First Quarter</i>

### MAY 2023

Saturday 6th	<b>Coronation Day for King Charles 3rd</b>
	<i>Full Moon</i>
	New Members night @ Observatory
Tuesday 9th	Committee Meeting
Saturday 13th	<i>Last Quarter</i>
	<b>Hororata GLOW Festival 3pm-8pm</b>
Sunday 14th	<b>Mothers Day</b>
Tuesday 16th	Members Meeting @ University
Saturday 20th	<i>New Moon</i>
	Members Night @ Observatory
Sunday 28th	<i>First Quarter</i>

## **2023 Open Night Season**

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

This years open night programme kicks off on **Friday 14 April**.

For the newcomers to the society, we run open nights every Friday night to the general public and some Tues/Weds nights for private groups.

Of course in July we have Kidsfest ... we will confirm the dates closer to that happening .. but that's 15 nights of fun!

### **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 !

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 or reach out to Rob Glassey or myself if keen.

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](https://cas.ivolunteer.com)**

We will run a training day for newcomers before we kick off so don't worry we will let you know how we run things before hand!

Please consider even helping out with a few as every slot filled helps the society.

Thanks

Simon

CAS Vice President

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## 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

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](mailto:member2@cas.org.nz)

### Upcoming Members Meeting Dates:

21st March: CAS AGM

18th April:

16th May:

20th June:

18th July:

15th August:

19th September:

17th October:

21st November:

(correct as at 1st March 2023, 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:**

## 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*

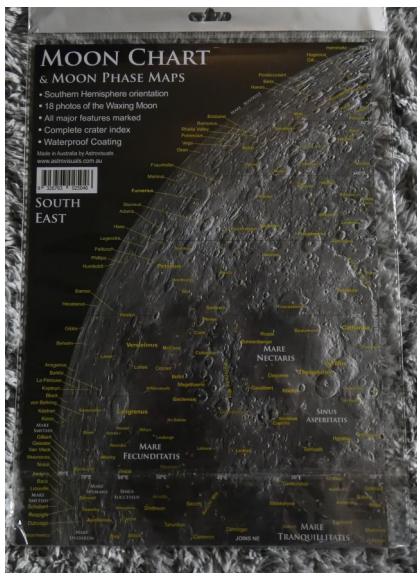


STAINLESS DRINK BOTTLES: \$15.00 with flip top 750ml



2023 CAS COSMIC CALENDAR:  
NOW \$12.00 EACH \$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.  
*New stock has been ordered*

DOUBLE -SIDED  
PLANISPHERE  
FOR SOUTHERN  
HEMISPHERE  
\$20.00



SUN-DISK KIT, \$25.00

Make a sundial at home

*New stock has been ordered,  
reserve your item today by email  
to Dale — [editor@cas.org.nz](mailto:editor@cas.org.nz)*

## 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 this 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.

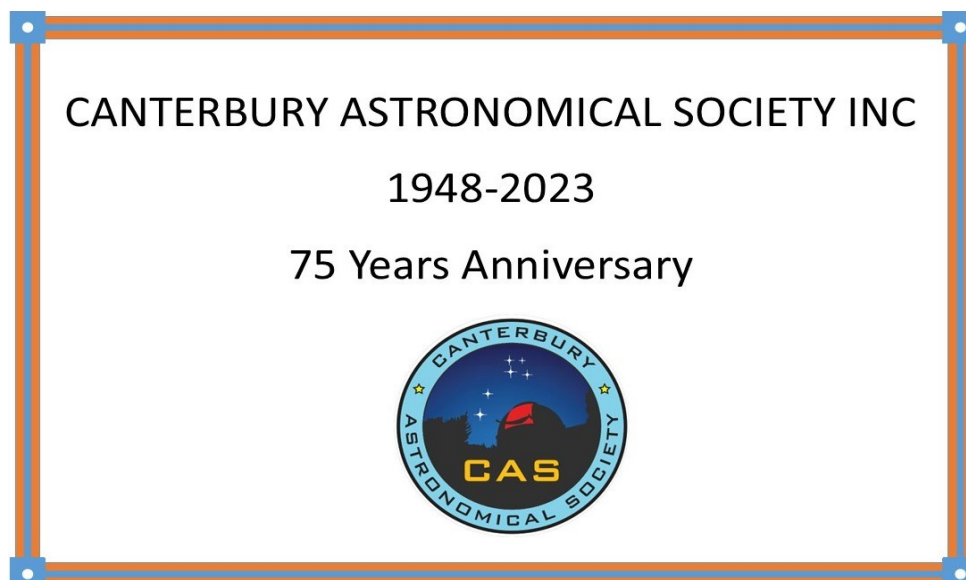
Also, please think about attending the RASNZ Conference this year as I believe that CAS' 75th Anniversary will be acknowledged and it will be fantastic to have a few people to help us celebrate. One of the projects I am looking to do for the Anniversary is to collate the history of the Clive Rowe Memorial 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





## 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 **Now \$12.00** ~~\$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



## 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 CSMAG and  
remember to keep an eye on the website for  
any updates*

## OBSERVATORY 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



## The Canterbury Astronomical Society: Reflecting on the Past Years and Paving the Way for the Future

*Simon Lewis - CAS Vice President*

Around AGM time I always get to thinking about the past years activities and what lies in store for the next year, perhaps even more so in this, our 75th anniversary year.

I am still amazed by how much time our committee and volunteers give to make a year successful and, in the past years, I know, many of us feel like we have climbed mountains from both a personal and society perspective.

We were celebrating our newfound success with packed open nights, sell out Kidsfest and some cold icy nights and then suddenly that was whisked away from us with COVID and we all ended up very isolated and that seemed to last for so very long. Trying to keep the society engaged and our members and visitors safe during that time was incredibly difficult but through our online presence and, with good management, we kept the society and its assets intact and financially sound. That was no mean feat I can tell you!

After COVID, things slowly opened up again but the weather last winter was definitely against us and with open night numbers depressed from a nervous public, it felt like another arduous battle. But now as we move into another year, and with COVID in our rear view mirror, preparations are well under way for another open night season and it looks like El Nina is also finally leaving after three years, so here's to more positive news and a better observing season!

The last year or so has been very successful though and we should not overlook that.

We saw a great increase in membership numbers post COVID, as people looked for new hobbies inside New Zealand. That has been great to see, and we welcomed so many new members to our society and this wonderful hobby.

This increase was also partly due to the newly created activities such as our juniors training programme called CAsTronauts, which saw a range of new younger members join the society, along with their families. A new training night schedule and induction day programmes started to encourage new and existing members to the observatory, to learn how to use our society telescopes. Some have been members for many years but never really using this fabulous facility.

The committee also reached out into new areas, such as creating a CAS calendar, filled with images from our own members.

This has sold immensely well over the past 2 years and has been extremely successful in getting CAS into the homes of many non astronomers!

We reached out more on social media with online membership drives that added over 100 new members in one Christmas campaign alone!

That created an amazing atmosphere with lots of newcomers to our members nights and training days.

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## [The Canterbury Astronomical Society: Reflecting on the Past Years and Paving the Way for the Future \(cont\)](#)

Alongside this CAS started to broaden its horizons too. We attended events like the Hororata Highland Games. This was incredibly successful, putting the society in front of nearly 15,000 members of the public, with solar viewing and a fabulous stand manned by our enthusiastic show team, the culmination of months of planning. It was a fabulous day and so successful the society has been invited to attend the Hororata Night Glow on May 13. It's highly likely we will get a return visit to the games in November too!

We attended some smaller events like the Matariki festival at the library and we will also attend the West Melton Fete on 26 March. Again, it's fabulous to have these opportunities to demonstrate the breadth of our societies activities to the public and what we offer to prospective members but these events are really only possible thanks to the commitment our committee and volunteers make, turning out of bed at 5am on a freezing morning to show off telescopes and guide people round the skies.

That dedication and commitment won us a Silver Award for tourism in Selwyn - that's a pretty impressive win for a volunteer organisation pitted against full blown commercial businesses!

But no organisation should rest on its laurels. What about the next few years and the future of CAS?

Well, we have an amazing foundation to build on and with some guidance and leadership I think we can continue growing and developing our society for our members and the general public.

Our observatory is the centre of all that we do. Let's be honest, without it we'd be hard pressed to get so many of the public through our doors, and on a good year this can be 4000-5000 people visiting us across our events. So that asset needs to be nurtured and looked after. Buildings need to be maintained and equipment refreshes carefully planned to ensure our facilities remain viable. Our lodge and the grounds need to be looked after and we can thank Kieren and Terry for a lot of that work.

If we are to grow as a society we need to look at how these facilities are used and plans created to meet the possible demand for them.

All this needs to be well planned so we can deliver these in a timely manner and remain financially stable, arranging grants and working groups to do the work as necessary.

A large portion of money to maintain our assets come from Friday Open Nights and Private Groups midweek and these take a huge amount of effort to achieve.

From advertising and ticket sales, to organising and running the evenings week after week takes a team of dedicated volunteers and a massive amount of hours from them. And not forgetting Kidfest!

That's 15 possible nights in a row of fabulous fun for the kids and their families.

You really don't forget hearing the excitement and wonder in those kids when they see Jupiter or Saturn through the big telescopes!

So very rewarding!

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## [The Canterbury Astronomical Society: Reflecting on the Past Years and Paving the Way for the Future \(cont\)](#)

There is much more potential too in our public programmes and what we can do there with the right skills and knowledge behind it. And we must not forget our own members either. Training nights and our own CAstronauts education programme are key attractions to many members and we need to ensure these continue to grow.

That growth also needs to be focused in attracting newcomers to the hobby and into our society. So we need to remain engaging to a whole new generation of astronomers with different tastes and interests. We've seen some of this with the excitement from visitors when John Pickering shows off his EVscope. That's a whole new generation and style of astronomy and one very much geared to social media and online presence but it's what interests our next generation of astronomers and we'd be foolish to dismiss that.

So how do you summarise all that?

Well we've had a long and successful history, with some lumps and bumps in the road, but the future looks bright, it's there for the taking. We can choose to grow and adapt or we will become a slowly irrelevant group to our members and the public. And we should not forget we have a great relationship with our local council which needs to be maintained as West Melton and the surrounding areas continue to grow. That's another question that remains in the back of my mind too, and surfaces every now and then.... what will the observatory site look like in 10 or 15 years time! Will we need to adapt to an ever expanding Rolleston and West Melton?

But most of our future aspirations rely heavily on our committee and volunteers.

So how can you help?

Well little things really! For example when it comes to open nights, volunteer to do a few nights during the winter. They are really rewarding and very addictive! It's really enjoyable sharing our knowledge with our visitors and they truly love coming to us and do so time and again. Every volunteer slot we fill during open nights is one less night another member has to commit to, so it really does help.

And don't worry about your knowledge level. We just need people who love to talk about the night sky and can talk to a few well known targets during the night. All training is provided and we won't dump you in the deep end first time out, promise!

Other areas like working bees also need your support. When we call for a working bee, please consider offering a few hours to help out. We need people who can paint, spray a few weeks, do a bit of weed spraying etc.

Every hour with a paint brush helps!

And there are even really important jobs like the weekly hoovering in the lodge and the cleaning of bathrooms and kitchen. They are not glamorous jobs but are incredibly important to running our open nights as no visitor wants to be faced with a messy bathroom when they open the door!

So these are incredibly important jobs to offer some time to.

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## **The Canterbury Astronomical Society: Reflecting on the Past Years and Paving the Way for the Future (cont)**

As for the future I have much more to bring to the table and a head full of ideas for the committee to consider as well!

From Kidsfests activities, to online and social media activities and events we have so much we can do but we really need people with the right skills to help. I'd love to hear from any member or volunteer with graphics and media creation skills, advertising and marketing experience, even architects and builders who can help us with future building plans. Every offer of help is immensely helpful.

And we also cannot operate without people willing to put time into simply helping with the daily operations of the society. Admin tasks, membership management and society operations are all time consuming and critical to our survival.

And while someone is doing that we can redirect resources we used for those activities to something else. So please do think how you can spare a few hours to help out the society.

I am immensely proud of what we have achieved over the past few years.

We have a fabulous future ahead of us if we plan and apply resources in the right areas and personally I am totally up for that!

And one last request, please do come along to the AGM on the 21 March at the UC. It's your opportunity to hear what the society has been up to and vote in your new committee for 2023 and a chance to hear how you might be able to help out too!

See you at CAS very soon!

## **RASNZ Conference 2023**

The 2023 RASNZ Conference and Annual General Meeting, over Kings Birthday Weekend, June 2nd to the 4th will be hosted by the Auckland Astronomical Society (AAS).

2023 is the Centennial year for the AAS.

The Conference is to be held at Waipuna Hotel and Conference Centre, 58 Waipuna Road, Mt Wellington, Auckland 1060

For more information check out the rasnz website

<https://www.rasnz.org.nz/news-events/conference-2023/rasnz-conference>

## COMET C/2022E3 (THE GREEN COMET)

For some of those who attended Stardate SI 2023 you may have seen the Green Comet,  
Here is a photo taken By John Pickering with his Unistellar eVscope 18/2/23



This photo  
Of Mars and  
the Green  
Comet was  
taken  
by  
Tom Heslop  
at the  
Observatory  
on the night  
of 12/2/23





## 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/](https://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](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](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](https://www.parliament.nz/en/petitions/sign/PET_130407)

**If you have not already signed you have until**

**Closing date: 20 Apr 2023 11:59 PM NZST**



## STARDATE SOUTH ISLAND FEBRUARY 2023 PHOTOS



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<sup>®</sup>**  
S C I E N T I F I C

<https://explorescientificusa.com/>



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

The logo for AstronZ features five blue stars of varying sizes arranged in a semi-circle to the left of the word "ASTRONZ". The word "ASTRONZ" is written in a large, bold, blue sans-serif font.

<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](mailto: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)

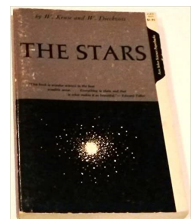
Remember these are not for return to the library

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](mailto:librarian@cas.org.nz)




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## QUOTES OF THE MONTH

“Knowledge isn’t free. You have to pay attention”. Richard Feynman.

“Whatever you are doing today, do it with the confidence of a 4-year old in a batman T-shirt”.

“Progress doesn’t come from early risers – progress is made by lazy men looking for easier ways to do things”. Robert A Heinlein.

*Quotes sourced from RASNZ Newsletter*



## LIBRARY CORNER cont BOOK REVIEW Welcome to the BOOK REVIEW Page

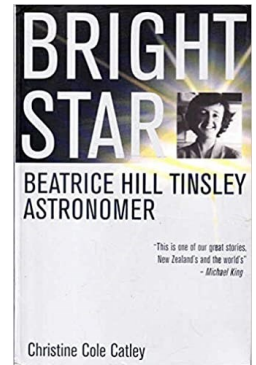
Each month I am asking for book reviews from our members. It only needs to be several lines, but mostly about some of its content and your thoughts,  
Please email your review to editor @cas.org.nz

The 2nd months Review is from ***Terry Richardson***

### ***Bright Star***

***Author Christine Cole Catley***

***Library catalogue 520.9222 COL (signed copy)***



We have all heard of or attended the annual BHT Lecture sponsored by RASNZ.

BHT stands for Beatrice Hill Tinsley and this book is her biography.

Beatrice was born Beatrice Hill and later married Brian Tinsley.

Although all her publications were under her married name of Tinsley, she regretted not using her maiden name as she was later divorced, but for recognition had to continue using the name Tinsley.

Born in England, prematurely following of an air raid in January 1941, she emigrated to New Zealand with her family in 1946. Graduating from Canterbury University as MSc with first class honours in maths and physics she moved to Austin Texas with her astronomer husband to complete her PhD thesis entitled "Evolution of Galaxies and its Significance for Cosmology". This began her short and brilliant career as a theoretical cosmologist until her untimely death from cancer at age 40.

Throughout her school and University days she was an exceptional student with a brilliant mind that appears most of the time to be far ahead of anybody else.

She gained full professorial tenure at Yale at the age of 37. Although her PhD was in "astronomy" she never touched a telescope or did any observational astronomy, instead excelling at Maths and Physics as a theoretical cosmologist. Her fame was for gathering data from different sources and synthesising it into new ways of explaining the findings. Most of her work centred on evolution of galaxies and stellar populations.

The book covers her professional life and achievements and her personal life in equal proportions.

Her personal life was unconventional, and personal happiness seems to have taken second place to her professional aspirations.

Much of the information comes from the fact that Beatrice was a prolific letter writer to all her family members and close friends.

This is a longish book, but well written and is never dull or boring. It weaves her professional and personal life together in a very readable fashion.

I can recommend it as a thoroughly good read.

*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.*

# 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](mailto: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](mailto: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, nebulae and galaxies.

Ray Pointon

[rpointon@cyberxpress.co.nz](mailto:rpointon@cyberxpress.co.nz)

## **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](mailto:observatory.director@cas.org.nz)

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### **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,

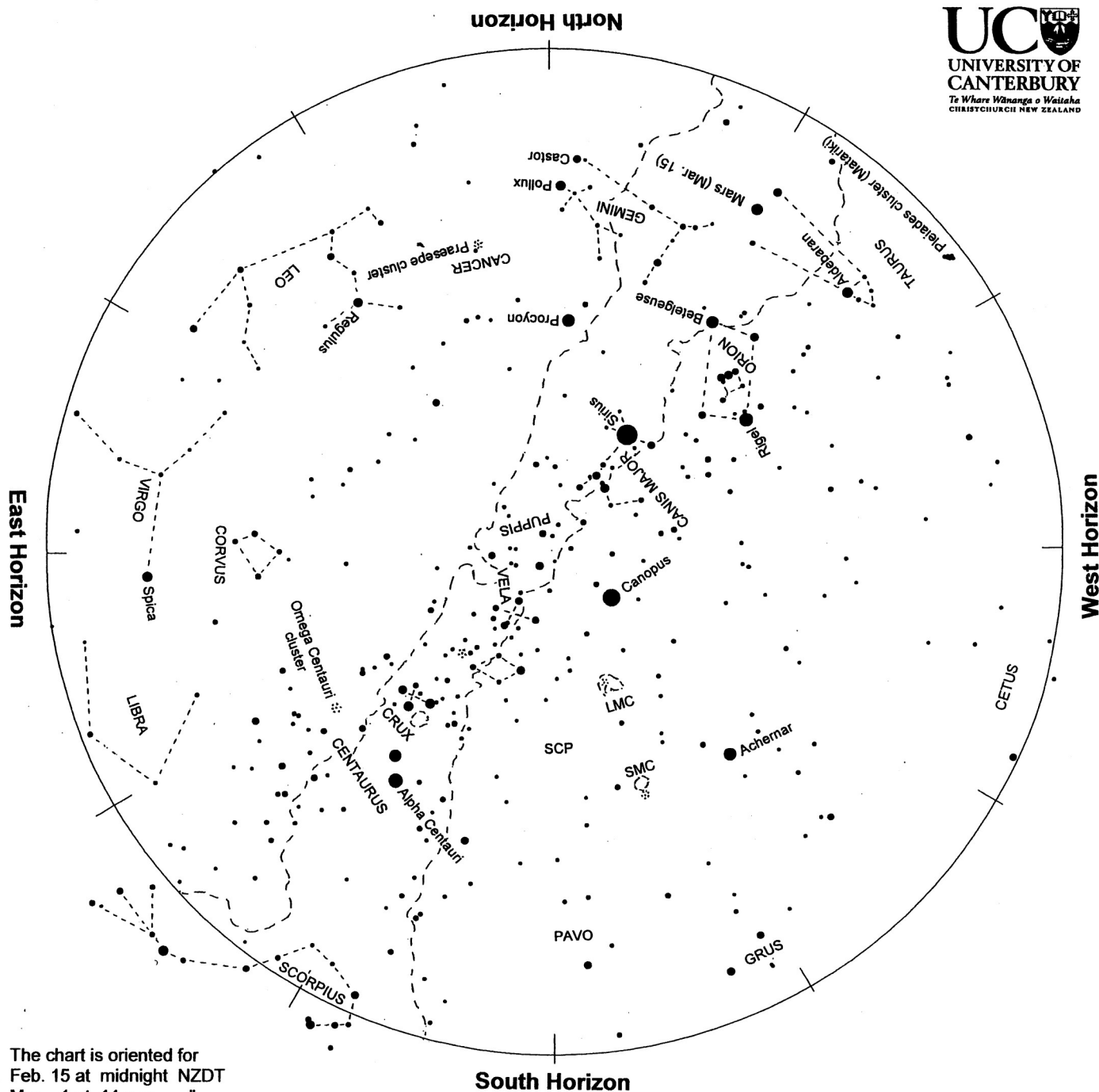
but of course can only use (or supervise) the instrument they are accredited for.

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](mailto:observatory.director@cas.org.nz)  
*Kieren Eden*



## EVENING SKY IN MAP FOR MARCH 2023



The chart is oriented for  
 Feb. 15 at midnight NZDT  
 Mar. 1 at 11 p.m. "  
 Mar. 15 at 10 p.m. "  
 April 1 at 9 p.m. "

### Evening sky in March 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 make a close pair of bright 'stars' low in the west at the beginning of the month but set early so aren't on the chart. Sirius, the brightest star, is northwest of overhead. Canopus, the second brightest, is southwest of the zenith. Orion, containing 'The Pot', is below Sirius in the northwest sky. Below Orion are orange Aldebaran and orange-red Mars, similar in brightness. The Southern Cross and Pointers are midway up the southeast sky. Nearby galaxies the Clouds of Magellan, LMC and SMC, are high in the southern sky. The Scorpion rises in the southeast later.

## EVENING SKY IN TEXT FOR MARCH 2023

At the beginning of the month the bright planets, **Venus** and **Jupiter** make an eye-catching pair low in the western twilight soon after sunset. On March 3<sup>rd</sup> they will be 1° apart, two full moon widths. (They aren't on the chart as they set well before 9 pm.) Over the month Venus holds its position in the twilight, setting 70 minutes after the Sun. Jupiter slips steadily lower, gradually disappearing. The thin crescent Moon will be near Venus on the 24<sup>th</sup>. **Mars** is the only naked-eye planet in the later evening sky. It looks like an orange-red star low in the north. It sets in the northwest around midnight mid-month. The Moon will be below Mars on the 28<sup>th</sup>.

Northwest of the zenith is **Sirius**, the brightest star in the sky (but out-shone by star-like Venus and Jupiter when they are around). Southwest of the zenith is **Canopus**, the second brightest star. Below 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'. Orion's belt points down and left to a V-shaped pattern of stars. These make the face of **Taurus** the Bull. The orange star is **Aldebaran** making one eye of the bull. Continuing the line from Orion down and left finds the **Pleiades** or **Matariki** star cluster, setting early.

At the beginning of March Mars, Aldebaran and Betelgeuse make a long (isosceles) triangle of orange stars. Mars holds its position in the sky through the month as Aldebaran and Betelgeuse creep west. By the end of the month the three make an equilateral triangle. Mars fades steadily as we leave it behind. It is like Betelgeuse at the beginning of March. By the end it is like Aldebaran.

**Sirius** is the brightest star in the sky both because it is relatively close, nine light years\* away, and 23 times brighter than the sun. **Rigel**, above and left of Orion's belt, is a bluish supergiant star, 40 000 times brighter than the sun and much hotter. It is 800 light years away. Orange **Betelgeuse**, below and right of the line of three, is a red-giant star, cooler than the sun but much bigger and 9000 times brighter. It is 400 light years from us. The handle of "The Pot", or Orion's sword, has the Orion Nebula at its centre; a glowing gas cloud many light-years across and 1300 light years away. It is nicely seen in binoculars.

Near the north skyline are **Pollux** and **Castor** marking the heads of **Gemini** the twins. Above and to the right of them is the star cluster **Praesepe**, marking the shell of **Cancer** the crab. Praesepe is also called the Beehive cluster, the reason obvious when it is viewed in binoculars. The cluster is some 500 light years from us.

**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, like most of the stars in Crux, is a blue-giant star hundreds of light years away. **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 becomes broader lower in the southeast toward **Scorpius**. Above Crux the Milky Way can be traced to nearly overhead where it fades. It becomes very faint in the north, 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. We are 27,000 light years from the galaxy's centre, below Scorpius.

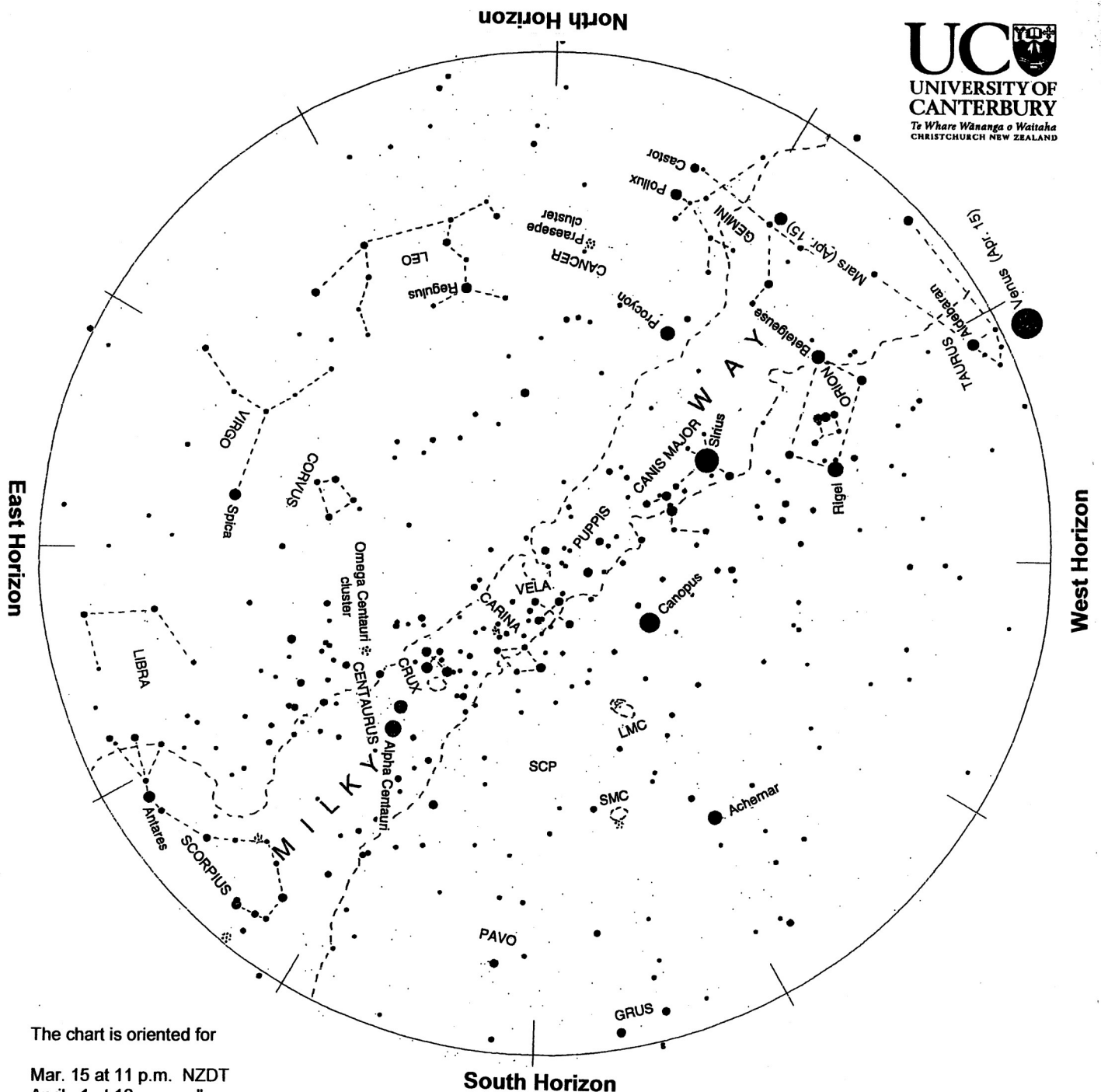
The Clouds of Magellan, **LMC** and **SMC** are high in the south sky, easily seen by eye on a dark moonless night. They are two small galaxies about 160 000 and 200 000 light years away.

Saturn emerges from the dawn twilight during March. By mid-month it is rising due east around 5:20 a.m. It looks like a medium bright, 1<sup>st</sup> magnitude, star with a slightly cream tint, in an empty area of sky. The thin crescent Moon will be by Saturn on the morning of the 20<sup>th</sup>.

\*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.



## EVENING SKY IN MAP FOR APRIL 2023



The chart is oriented for

Mar. 15 at 11 p.m. NZDT  
 April 1 at 10 p.m. "  
 April 15 at 8 p.m. NZST  
 May 1 at 7 p.m. "

### Evening sky in April 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 or clockwise shift each night as we orbit the sun.

Brilliant Venus is the 'evening star', setting 1½ hours after the Sun. Sirius, the brightest true star, is midway down the western sky. Below it is Orion with bright stars Rigel, blue tinted, and orange Betelgeuse. Canopus, the second brightest star, is southwest of overhead. Below and right of Sirius, 'the dog star', is Procyon marking the smaller dog. Below it are Pollux and Castor, the Gemini twins, with orange-red Mars to their left. Regulus in Leo is due north and Spica in Virgo is due east. Crux, the Southern Cross, and The Pointers, Alpha and Beta Centauri, are high in the southeast sky.

## EVENING SKY IN TEXT FOR APRIL 2023

**Venus** is the brilliant 'evening star', setting in northwest 1½ hours after the Sun. The planet will be left of the Pleiades/Matariki star cluster around April 10<sup>th</sup>. Though bright, Venus is of little interest in a telescope, looking like a tiny gibbous moon, a moon between first quarter and full. It is 160 million km away from us mid-month. The thin crescent Moon will be near Venus on the 23<sup>rd</sup>.

After Venus sets, **Sirius** is the brightest star in the sky. It is northwest of overhead at dusk and sets in the southwest after midnight. Sirius is the brightest true star. The second brightest is **Canopus**, southwest of the zenith at dusk. Below 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', now tipped on its side. In the Pot's handle, or Orion's Sword, is the Orion Nebula, a glowing cloud easily seen in binoculars.

Below and right of Sirius is **Procyon** marking the head of Canis Minor one, of the two dogs following Orion the hunter across the sky. Sirius marks the head of Canis Major, the big dog. The big dog's hindquarters are made by the bright stars above Sirius.

Low in the northwest below Procyon are three stars of similar brightness. The vertical pair are **Pollux** and **Castor**, the heads of **Gemini** the Twins. Left of them is **Mars**, looking like an orange star. We passed Mars late last year. It is now 240 million km away and just a tiny disk in a telescope. The Moon will be between Mars and the Twins on the 26<sup>th</sup>. Though related in myth, the twins are quite different from each other. Pollux is an orange star 31 times brighter than the Sun and 34 light-years (l.y.)\* from us. Castor is a hot white star about 47 times the Sun's brightness and 51 l.y. away.

Above and right of the Twins is the **Praesepe** star cluster, looking like a hazy spot to the eye. It marks the shell of **Cancer** the Crab. Praesepe is also called the Beehive cluster, the reason obvious when it is viewed in binoculars. Praesepe is 600 light-years away. Its age is around 600 million years, so its biggest and brightest stars have long ago burnt out.

Right of Praesepe, almost due north, is the medium-bright star **Regulus**. It is the brightest star in **Leo** the Lion. The curve of stars below Regulus outlines Leo's mane, upside down in our southern hemisphere view. A crooked vertical line of stars right of Regulus makes Leo's hind quarters with the brighter star further right being his tail. The Moon will be below Regulus on the 29<sup>th</sup>.

The lone bright star due east is **Spica**, the brightest star in **Virgo**. Above Spica is the roughly kite-shaped constellation of **Corvus** the Crow. In the later evening the bright orange star **Arcturus** rises toward the northeast, often twinkling red and green. (It isn't on the chart.)

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

The **Milky Way** is brightest in the southeast above Crux. It can be traced to nearly overhead where it fades and becomes very faint in the northwest, 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 midway down the southwest sky, easily seen by eye on a dark moonless night. They are small galaxies about 160,000 and 200,000 light years away.

Saturn is the only naked-eye planet in the dawn sky, rising due east after 2 a.m. It looks like a medium-bright star with a cream tint in an empty region of sky. By dawn it is well up the eastern sky. The Moon will be near Saturn on the mornings of the 16<sup>th</sup> and 17<sup>th</sup>.

\*A **light-year (l.y.)** is the distance that light travels in one year: nearly 10 million million 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.

## CAS COMMITTEE AND OFFICERS 2022/2023

Public Nights and Group Bookings		bookings.liaison@cas.org.nz
President:	Rob Glassey	president@cas.org.nz
Vice President:	Simon Lewis	vice.president@cas.org.nz
Treasurer:	David Brian	treasurer@cas.org.nz
Secretary:	David Brian	secretary@cas.org.nz
Observatory Director:	Kieren Eden	observatory.director@cas.org.nz
Editor:	Dale Kershaw	editor@cas.org.nz
Membership Secretary:	Marc Bunyan	membership@cas.org.nz
Librarian:	Sean Mullis	librarian@cas.org.nz
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Committee Members:	Carol McAlavey	member2@cas.org.nz
	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](http://www.cas.org.nz)

### CAS Contact Information

Canterbury Astronomical Society Inc.

PO Box 25-137

Christchurch 8140

Web: [www.cas.org.nz](http://www.cas.org.nz)

Canterbury Astronomical Society Facebook Group:

[www.facebook.com/groups/CanterburyAstronomicalSociety](https://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 1<sup>st</sup> 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](mailto:editor@cas.org.nz)

The deadline for each issue is the 1<sup>st</sup> 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, subscription 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 eligible 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 institution, 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: \_\_\_\_\_