



CASMAG

The official magazine of the Canterbury Astronomical Society

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

75th ANNIVERSARY YEAR 1948-2023

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

MAY MEMBERS MEETING

TERRY RICHARDSON

CAS Vice-President

Topic:

"Near Earth Phenomena"

"Meteors and Aurora"

With our own Meteor camera and the increase of Aurora activity this will be an interesting talk.

MEMBERSHIP

2023 ANNUAL SUBSCRIPTIONS/ MEMBERSHIP



payment for the 2023 Year is now DUE

This 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) **PLEASE advise if there are any changes to your details: Address, Phone Number, email**, Please email any changes to membership@cas.org.nz so the records can be updated

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



IN THIS MONTHS ISSUE

Front Cover;	Monthly meeting information
Page 2:	In this Issue /Editor Notes
Page 3:	Calendar Dates
Page 4 :	2023 Open Night Info/Monthly Meeting Info
Page 5	Meteor Camera Installed
Page 6:	Welcome to our new Members/Observatory Info
Page 7:	Cosmic Connections from your President
Page 8:	Cosmic Connections <i>cont</i> /Photos
Page 9:	NEAIC & NEAF Photos <i>cont</i>
Page 10:	NEAIC & NEAF Photos <i>Cont</i>
Page 11:	CAS 75th Anniversary 2023
Page 12:	From The Archives/R F Joyce Memories
Page 13:	R F Joyce Memories cont/Photos
Page 14:	Observatory working Bee/Photos
Page 15	Photos <i>cont</i>
Page 16:	CAS Merchandise Available
Page 17:	CAS Merchandise Available cont
Page 18:	Thank you to our Sponsors
Page 19:	Library Corner/Quotes for the Month
Page 20:	Library Corner/DVD Review
Page 21:	Members Interest Section/Jupiter's new moons
Page 22:	Lodge Security <u>IMPORTANT INFORMATION</u>
Page 23:	Evening Sky on Map for May
Page 24:	Evening Sky in Text for May
Page 25:	Morning Dawn Sky Text for Matariki/Pleiades
Page 26:	Morning Dawn Map for Matariki/Pleiades
Page 27:	Contact Information
Page 28:	Membership Form/Payment Details

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
 Dale Kershaw

[Please see page 27 for notes:](#)

CAS Calendar MAY-JULY 2023



MAY 2023

Saturday 6th	Coronation Day for King Charles 3rd <i>Full Moon</i>
Tuesday 9th	New Members night @ Observatory Committee Meeting
Saturday 13th	<i>Last Quarter</i> Hororata GLOW Festival 3pm-8pm
Sunday 14th	Mothers Day
Tuesday 16th	CAStroNauts @ University 6.30-7.30pm Members Meeting @ University from 7.30pm
Saturday 20th	<i>New Moon</i> Members Night @ Observatory
Sunday 28th	<i>First Quarter</i>

JUNE 2023

Saturday 3rd	New Members Night @ Observatory
Sunday 4th	<i>Full Moon</i>
Monday 5th	Kings Birthday Holiday
Sunday 11th	<i>Last Quarter</i>
Tuesday 13th	Committee Meeting
Sunday 18th	<i>New Moon</i>
Tuesday 20th	CAStroNauts @ University 6.30-7.30pm Members Meeting @ University from 7.30pm
Saturday 24th	Members Night @ Observatory
Monday 26th	<i>First Quarter</i>

JULY 2023

Saturday 1st July	Kidsfest Starts until 16th July
Monday 3rd	<i>Full Moon</i>
Monday 10th	<i>Last Quarter</i>
Tuesday 11th	Committee Meeting
Friday 14th	Matariki Holiday
Sunday 16th	Kidsfest Last Night
Tuesday 18th	<i>New Moon</i> CAStroNauts @ University 6.30-7.30pm Members Meeting @ University from 7.30pm
Saturday 22nd	Members Night @ Observatory
Wednesday 26th	<i>First Quarter</i>

2023 Open Night Season

Its that's time again! Doesn't it come round quick!!! This years open night programme has started. 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

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

Thanks

Simon

CAS President

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

Upcoming Members Meeting Dates:

16th May: TBC TERRY RICHARDSON

20th June: TBC

18th July: TBC

15th August: TBC

19th September: TBC

17th October: TBC

21st November: TBC

(correct as at 1st May 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

METEOR CAMERA

Following this invitation from RASNZ, CAS now has a Meteor camera at the Observatory

“We are currently building a public network of fireball-tracking cameras with the goal of locating New Zealand’s next meteorite. These cameras capture the night sky (on clear nights!) and are triggered by bright flashes. The camera data are each day uploaded to the Global Meteor Network (you can see the information captured here: <http://istrapstream.com/rms-gmn/?country=NZ>). With enough cameras capturing a fireball, it is possible to triangulate the trajectory, speed and mass of the rock traversing Earth’s atmosphere, and therefore the strewn field for potential meteorites. This led to one meteorite search in Dunedin in mid-2022. We expect that several meteorites per year should land in NZ, although only 9 have been documented in the last 160 years. It is also possible to identify meteor showers (one camera in 2022 captured > 400 meteors in one night). Many observatories and schools across NZ are already part of the program and we are looking for more of the public to join in. We have 5 cameras available to RASNZ members.”

The committee agreed to purchase a camera setup through RASNZ and with thanks to Terry Richardson for installing and setting this. It is now up and working, recording and reporting data daily.

Another great resource for CAS and its members, and the wider astronomy field. As you can see the camera is mounted on the side of the Clive Rowe Dome,

Note: It is set at head height so be careful.

Photos: Terry Richardson



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.

Donald Johnson
Bryn Kingston-Richards
Kaitlyn Martin
Amadeo Enriquez-Ballesterero
Karen Zhixia Pang



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

Apologies from the editor for any spelling mistakes in the names

OBSERVATORY IMPORTANT INFORMATION

DOOR CODE & ALARM AT THE OBSERVATORY

The Door code and Alarm code 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

COSMIC CONNECTIONS:

Monthly Updates and Insights from Your President: May 2023

Simon Lewis – CAS President

Hi and welcome to another short President's update. Well our winter season is well and truly underway although the weather has been hit and miss, as always seems to be the case recently!

We did get one open night underway with clear viewing to be then obscured by the cloud, but we saved the day (or should that be night!) with some moon viewing through the clouds and an impromptu cloudy night tour of the sky on the projector using Stellarium. We must have done a good job as we managed some 5 star reviews from the night, so it shows we can hold our own even when the weather crashes the party!

Most of this month I spent traveling to the USA, leaving NZ on Easter Monday and winging my across the pacific to the US for NEAIC and NEAF. Now if you are into imaging these two conferences are legendary!

NEAIC is the North Eastern Astro Imaging Conference and is held over 2 days at the Crowne Plaza in Suffer, about 1.5 hours from New York City, while NEAF (NorthEast Astronomy Forum) is a more generic, 2 day astronomy and space conference held at the Rockland Community College just 10 minutes or so from the hotel.

I was lucky enough to be invited by ZWO to both and I was originally slated to present a view on astro imaging in the southern ocean and some product / software demos over a couple of days but ended up presenting every day of the conference!

Plus a whole load of Youtube interviews for my own channel

(youtube.com/@teamastroworkz) and for ZWO. It was a great opportunity to spread the word about CAS too and I had a number of conversations about how amazing our teams are and how well we engage with the public. It was fun sharing what we do in the south here and also network with some of the biggest and well known names in astronomy!

A great time was had by all and highly likely I will be on a return visit next year!

Of course no trip would have been complete without some sightseeing.

So I spent a few days racing round NY doing the normal touristy things too! I didn't get as much time there as I hoped but there is always next year for a few more attractions to tick off the list :)

While I was away the team were busy prepping for the forthcoming Hororata Night Glow on 13 May and of course getting ready for more events through the year such as Kidsfest, BHT lectures and our 75th anniversary year celebrations.

The team have also been carrying out some overdue maintenance with Kieren and team sorting the roof in the 16" which was by no means a pleasant job!

Think many years of rodent inhabitation and I will leave the rest to your imagination!

Well done to the team sorting that stinky job!

Cont next page

COSMIC CONNECTIONS: cont

We also did a working bee before first open nights with a spot of gardening, some pruning and a good clean out before we opened to the public.

Our website is also undergoing a bit of spring cleaning too with a bit of a refresh thanks to Marc.

Still plenty more to do and lots of planning to be done as some of our sheds/domes are starting to feel their age. We also need to be looking to the near future in regards to equipment as some of our gear is also getting long in the tooth and we need a good longer term plan on how to minimize the risk of losing a major asset to age.

Lots of things to keep our teams busy and as always do keep an eye on the website and CASMAG for news and information on upcoming events and society activities as we have a lot planned for this winter!

That's about it for this time round - look forward to seeing you soon at the observatory or at our UC or social nights, and I highly encourage you to get out and enjoy these great events in your society.

Note:

While in New York, Simon was able to personally thank those at Explore Scientific, for their support and items that they sent for our raffle last year.

Its great to be able to personally thank those that support CAS.

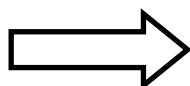
NEAIC & NEAF PHOTOS:



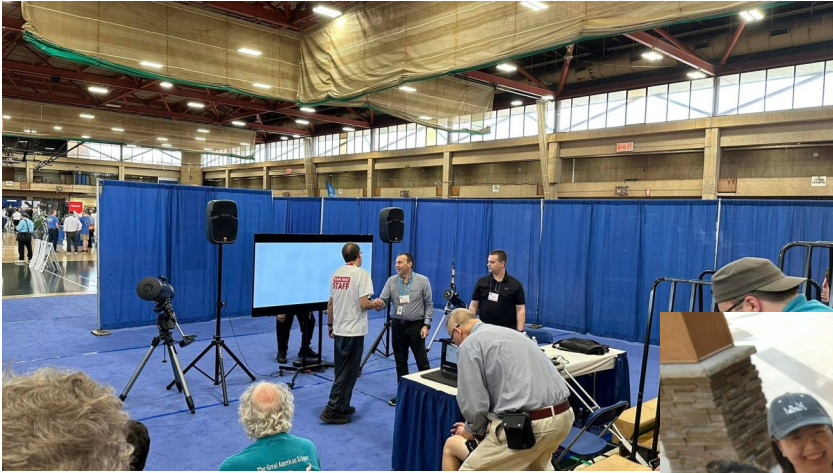
A selection of Simon's photos from his NY trip, great to meet up with online friends and put a face to the names

Scott Roberts head of Explore Scientific (left)
 ← Simon and Dan Higgins of Astroworld TV

Big show floor at NEAF
 Eric Watson from AstroworldTV



NEAIC & NEAF PHOTOS: [cont](#)



NEAF team Ken Boroughs welcoming me to the presentations ←

Zwo team & TJ Connelly →



More online friends, Eric Watson from AstroworldTV (left) Beaner Franks - ZWO admin - back left - Tyler Bowman from Explore Scientific a big CAS supporter and honorary member and Simon ←

Tyler Bowman & Simon, finally get to meet in person →

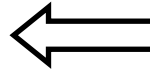


TJ Connelly ZWO admin and astro imager & Simon. ←

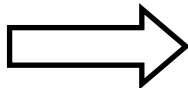
NEAIC & NEAF PHOTOS: [cont](#)



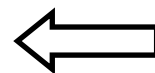
Ceiling in Grand Central with Milky Way and Zodiacs



ASI AIR lead developer, Ji modelling our fine CAS beanie he didn't take it off for a week I think!



NOT quite hand luggage!!!



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.

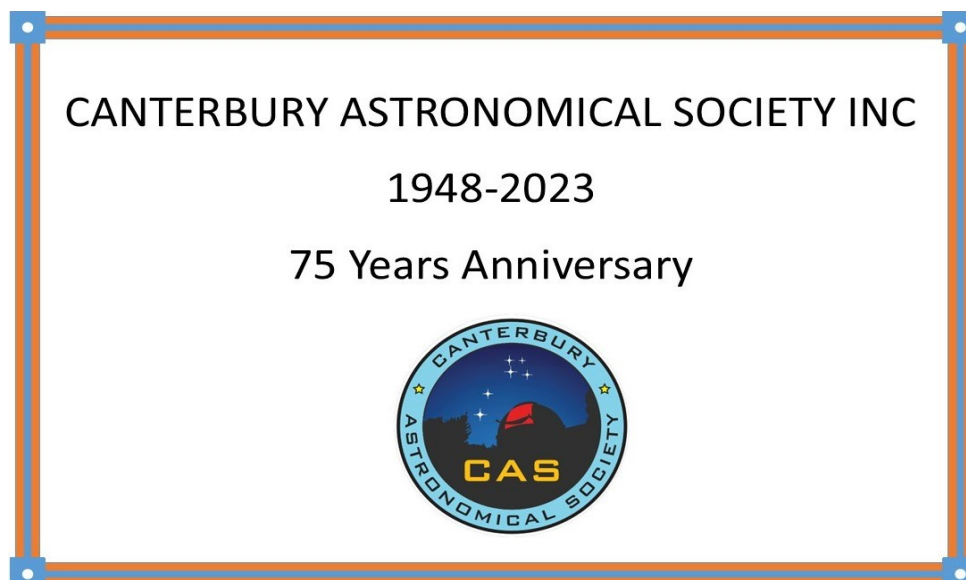
Also, please think about attending the RASNZ Conference this year as I believe that CAS' 75th Anniversary will be acknowledged and it will be fantastic to have a few people to help us celebrate. One of the projects I am looking to do for the Anniversary is to collate the history of the Clive Rowe Memorial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



FROM THE ARCHIVES. RF JOYCE

At our April Meeting Mr Neil Price talked to us about his childhood memories of his near neighbour RF Joyce .

Robert Francis Joyce 4 November 1886—22 March 1961

This is a copy of the information covered in his talk from the
Kaiapoi Museum.

Roberts Francis Joyce, known as Frank Joyce to his friends was born 4th November 1886 at Oswesty, Shropshire, England, the second son in the family of five sons and one daughter of brewer, John Barnett Joyce and Mrs Ellen Louisa Joyce of Stonar, St Margarets Bay, England. The Joyce family were turret clock manufacturers in Whitchurch, Shropshire from as early as the 18th century and the company continues there to the present day.

Frank was educated at private schools in London and Bournemouth, his father owning the east Kent Brewery at sandwich in Kent.

Frank became a brewer and in 1908, at the age of 21 emigrated to New Zealand and worked at a brewery in Wellington, as an Analytical Chemist. During the first World war he served with the NZ Field Artillery, initially as Gunner No 50244 in Wellington. By February 1918 he had been promoted to Corporal and as such he sailed with the 34th reinforcements to Liverpool aboard the H.M.N.Z.T.100 "Ulimaroa" which arrived on 20 March 1918. he served in England and France.

His next of kin was listed as his Brother, Lieutenant H O Joyce of the Royal Navy.

After the war at the end of 1919 he moved south to settle in Christchurch to be manager of the White Star Brewery, which had offices in Christchurch and a brewery at Kaiapoi. A couple of years later he moved to Kaiapoi, where he remained for the rest of his life until his death on 22nd March 1961, aged 74. He never married but kept very busy with a multitude of various interests. At Kaiapoi he took up poultry farming and then in 1926 he established the Kaiapoi branch of Broadcast Reception Ltd, a radio manufacturing and service business. He later operated this on his own account as the Joyce radio Service from his home at 33 fuller street Kaiapoi. He employed a couple of men to help him and sold radios under his brand name of "JoyRad". He owed a dog named "Voice" after the dog in the famous HMV His Masters Voice Logo. He had been a "ham" radio operator since his earliest days in NZ and in 1914 was President of the New Zealand Amateur Wireless association.

One of frank's abiding interests was astronomy, at his home he built an observatory, known as the Neptune Observatory, because it was first used on the 100th anniversary of the discovery of the planet Neptune, i.e. in 1946. He was a member of the Royal Astronomical Society of NZ and of the Canterbury Astronomical Society, being one of the founders of the latter and its first president. He was later awarded a Life membership of the Canterbury Astronomical Society. In 1955 at the age of 69. he was awarded the Murray Geddes Memorial Prize by RASNZ for his services to Astronomy.

Cont next page

FROM THE ARCHIVES. RF JOYCE cont

The Canterbury Astronomical Society's Observatory at West Melton is known as the R F Joyce Memorial Observatory, its funding coming from his bequest. He was also Kaiapoi's Weatherman. For many years he took weather readings for the new Zealand Meteorological Service at his Neptune Observatory in Kaiapoi, and he was a fellow of the Royal Astronomical Society (London). He was also Harbour Master and Scoutmaster for the Sea Scouts. The Sea Scout movement was short lived in Kaiapoi due to the fact that Mr Joyce took the scouts over the Waimakariri Bar in a whale boat named "Argo". Naturally the parents were up in arms and out went Mr Joyce as Scoutmaster. Ever since that episode he was called "Skipper Joyce" and he carried that name until he died.

He was a foundation member, life member and a former commodore of the Waimakariri Sailing Club and a photographer.

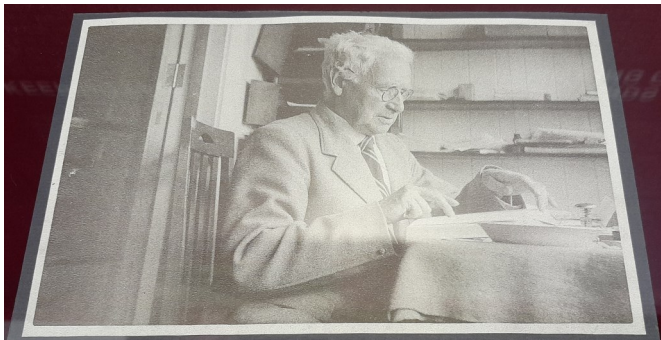
Another long standing hobby was stamp collecting and while in Wellington he assisted in forming the Wellington Philatelic Society. His philatelic knowledge was profound and his activities were know throughout the Dominion and Australia. He was a fellow of the Royal Philatelic society (London).

In 1935 Robert Francis Joyce was elected to the Waimakariri Harbour Board where he served as Chairman and Secretary. Also in 1935 he stood for General Election for Kaiapoi and served two terms as a Councillor.

On the 17th May 1949 R F Joyce presented to the Canterbury Public library the families rare "Breeches Bible" which contained inscription's of the family tree dating from 1560 and eighteenth century.

During the Second World war Frank served in the Home guard.

Frank is buried in the Kaiapoi Cemetery RSA section.



R F Joyce at work 1958-59

Source Kaiapoi Museum



Headstone at Kaiapoi cemetery. RSA Section

Franks Home
at 33 Fuller
Street
Kaiapoi



Footnote: The Museum holds the copy of the will stating the bequest to CAS, I intend to follow this up as to the amount gifted to cas and will update in a future casmag: Editor

OBSERVATORY WORKING BEE

On Easter Friday a working bee was held at the observatory before our Open Night season started. Trees were trimmed/pruned, gardening done, gate posts and the sign post painted, the lodge and domes cleaned as well as the toilets, Thanks to those who came out to help with this task. As they say many hands made the work happen faster.



Photos on this page are during the work.

Photos:
Mandy Heslop
& Dale Kershaw



More photos on next page

OBSERVATORY WORKING BEE cont

This page shows the results of all the hard work:



Note: At the time I was fostering a wee kitten (Benny) and I took him out with me for the day with his pen and assorted stuff, As you can see he made lunch time friends with Kieren and Simon, along with the others.

CAS MERCHANDISE

Cas Branded items for sale

Coffee Mugs are \$15.00 each



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



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

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

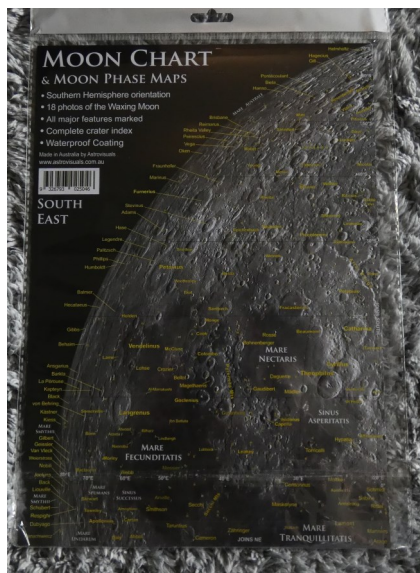


2023 CAS COSMIC CALENDAR: NOW \$10.00 EACH \$15.00

All new 12 photos taken by our Own CAS Members



MOON CHART



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

DOUBLE -SIDED PLANISPHERE FOR SOUTHERN HEMISPHERE \$20.00



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



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 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>

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/>

The logo for Explore Scientific features the word "EXPLORE" in a large, black, sans-serif font. The letter "O" is replaced by a stylized yellow and orange globe. Below "EXPLORE" is the word "SCIENTIFIC" in a smaller, black, spaced-out sans-serif font. A registered trademark symbol (®) is located to the upper right of "EXPLORE".

<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.

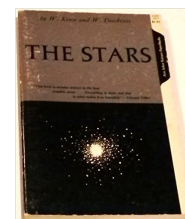
This Months Books for Adoption are:

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

“Reality is that which, when you stop believing in it, doesn’t go away”.

Philip K. Dick.

“The only reason for time is so that everything doesn’t happen at once”.

Einstein.

“Those people who think they know everything are a great annoyance to those of us who do”.

Isaac Asimov.

“Courage is the commitment to begin without any guarantee of success”.

Johann von Goethe.

Quotes sourced from RASNZ Newsletter

LIBRARY CORNER cont BOOK/DVD REVIEW Welcome to the BOOK/DVD REVIEW Page

Each month I am asking for Book/DVD 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

This months review is of a DVD set by Terry Richardson

The Planets. The History Channel

This set is in the library but not yet catalogued (because I got them first!) This is a boxed set of three DVD's covering in sequence:-

- The inner planets – Mercury and Venus.
- The Earth and the Moon, Mars and Jupiter.
- Saturn and the outer planets.

This boxed set is part of a wider series on the Universe. I am unable to find a date for this production but the format (shape on the tv screen and graphics) is a little dated and I am guessing may go back 10 years or so. That said, the content is informative, well presented and is easy to watch. Some of these kinds of program are full of clever graphics and little actual information. This set presents a lot of factual information along with actual imagery and graphics in a way that makes the information easy to absorb. There are five hours total viewing in this set but can be watched in easy sections which are complete in themselves.

I enjoyed viewing this series. I think it has a lot of information that is interesting for all ages, and for beginners as well as those “in the know”. Overall I can recommend this set as well worth viewing for anybody interested.



*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

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, nebulae and galaxies.

Ray Pointon

rpointon@cyberxpress.co.nz



JUPITERS MOONS

Astronomers have discovered 12 more moons orbiting Jupiter!

This means that Jupiter now has a total of 92 moons, more than any other planet in our solar system.

The new moons were discovered using telescopes in Hawaii and Chile in 2021 and 2022. The initial sightings have been confirmed with additional observations.

The new moons are between 1 and 3 kilometres in size.

Jupiter's newly discovered moons have not yet been named. Only half of them are large enough—at least 1.5 kilometres—to justify a name.

Saturn and Jupiter constantly compete for the title of "Planet with the most moons".

Saturn has held the top spot since 2019 when 20 more of its moons were discovered. Before that Jupiter was the solar System leader with 79 confirmed moons. Currently Saturn is known to have 83 moons.

Editor note: I found this item on face book but cannot remember the page or website

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.

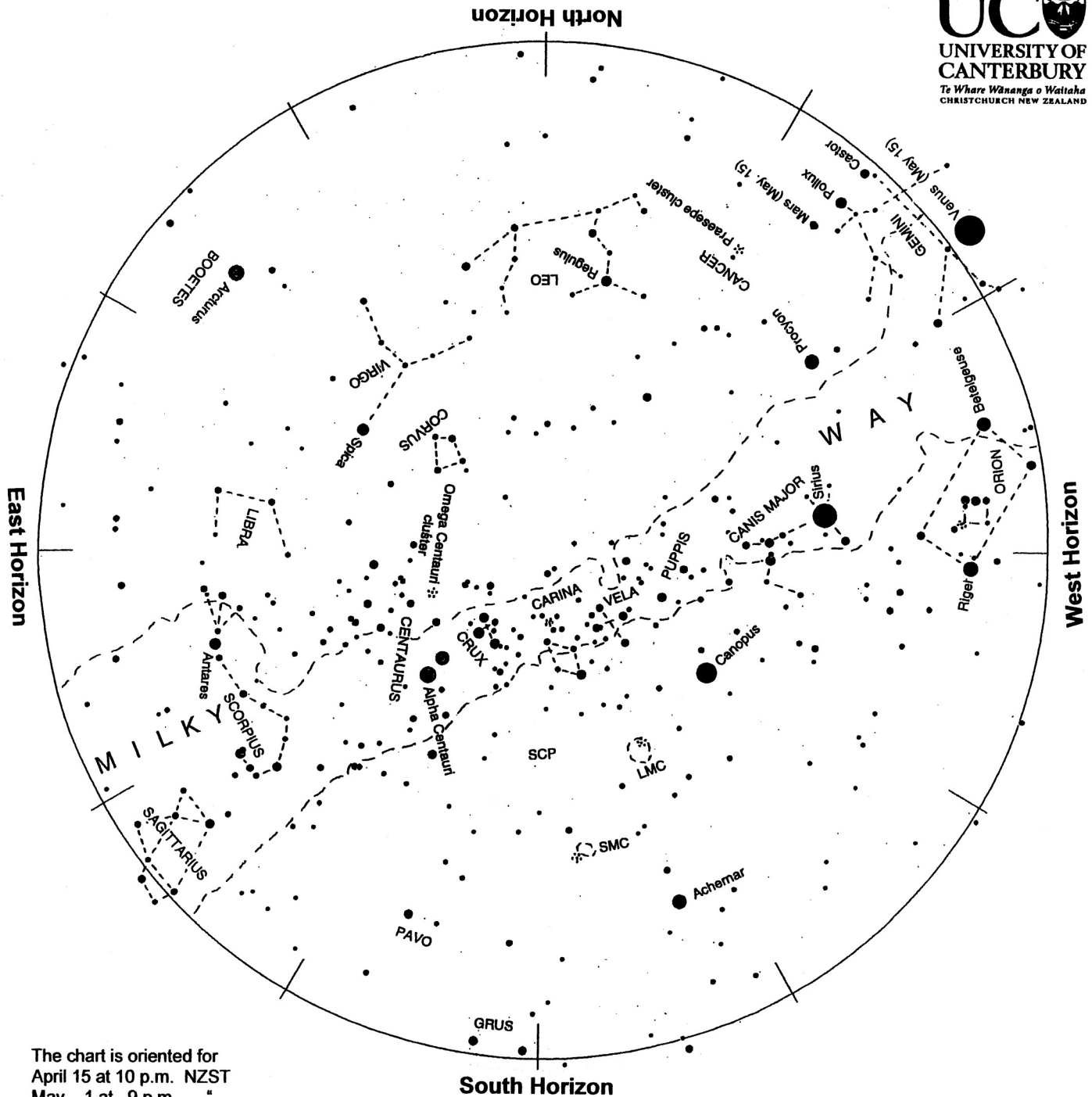
This sounds a bit restrictive, but has become necessary due to recent misuse and possible damage to some instruments.

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

Kieren Eden



EVENING SKY IN MAP FOR MAY 2023



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

Evening sky in May 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 is the 'evening star' appearing in the northwest soon after sunset and setting around 8 pm. Reddish Mars appears above and right of it when the sky darkens. Sirius, the brightest true star, is midway down the western sky. Directly below it are bright stars Rigel and Betelgeuse. Canopus is southwest of overhead. Crux, the Southern Cross, and the Pointers, Alpha and Beta Centauri, are southeast of the zenith. Orange Arcturus, in the northeast, often twinkles red and green.

EVENING SKY IN TEXT FOR MAY 2023

Venus is the 'evening star' setting in the northwest 2½ hours after the Sun. It is swinging out from the Sun as it catches up on Earth on the inside lane, so sets later. It is 130 million km from us mid-month. In a telescope it looks like a first-quarter Moon. When the sky is dark, **Mars** appears above and right of Venus, looking like a medium brightness orange-red star. At mid-month Mars will be at the top of an equally spaced line with **Castor** and **Pollux**, the heads of **Gemini** the Twins. Mars holds its position night-to-night while the Twins slip slowly down the sky. The crescent Moon will be below Venus on the 23rd, between Venus and Mars on the 24th, and to the right of Mars on the 25th.

As the sky darkens **Sirius** appears midway down the western sky. It is the brightest of all the stars but much fainter than Venus. It twinkles with all colours when setting in the southwest around 11 pm. Sirius, 'the Dog Star', marks the head of **Canis Major** the big dog, now head down, tail up. **Canopus**, second brightest star, is southwest of overhead.

Below Sirius are bluish **Rigel** and reddish **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.

Crux, the Southern Cross, is southeast of the zenith, to the right of '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 light years away. **Canopus** is also very luminous and distant: 13 000 times brighter than the sun and 300 light years away.

Following the Milky Way down into the southeast finds **Scorpius**. Orange **Antares** marks the Scorpion's body. Its upside-down tail curves to the right of Antares. **Antares** is a red-giant star like Betelgeuse: around 12 times the mass of the sun but wider than Earth's orbit. It is 600 light years away and 19 000 times brighter than the sun.

Orange **Arcturus** is the brightest star in the northern sky. It often twinkles red and green when low. Arcturus is the brightest red star but, at 37 light years, is much closer than Antares. It is about 120 times brighter than the sun.

The **Milky Way** is brightest in the southeast toward **Scorpius** and **Sagittarius**. In a dark sky it can be traced up past the Pointers and Crux and fading toward Sirius. The Milky Way is our edgewise view of the galaxy, the pancake of billions of stars of which the sun is just one. The thick hub of the galaxy, 30 000 light years away, is in Sagittarius. The nearby outer edge is by Orion where the Milky Way is faintest. A scan along the Milky Way with binoculars shows many clusters of stars and some glowing gas clouds, particularly in **Carina** and **Scorpius**.

The Clouds of Magellan, **LMC** and **SMC**, are midway down the southern sky, easily seen by eye on a dark moonless night. They are small galaxies compared to our Milky Way Galaxy. The Large Magellanic Cloud is 160 000 light years away and the Small Cloud is 200 000 light years away.

Bright planets are in the morning sky. Saturn rises due east around 1 a.m., looking like a medium brightness cream-tinted star. It is north of the zenith at dawn. Golden Jupiter rises around 5 a.m. and is the brightest 'star' in the dawn sky. Mercury first appears as a faintish (3rd magnitude) star below and right of Jupiter around the 10th. It slowly climbs toward Jupiter and brightens. By the 20th it is a medium-bright 'star' 7° below and right of Jupiter. It continues to brighten but starts slipping lower after that. The Moon will be by Saturn on the 14th, and near Jupiter and Mercury on the 18th.

The full moon will look a little odd in the late morning hours on May 6th as it grazes the fuzzy edge of Earth's shadow, the penumbra. The Moon's bottom-right edge will be darkest around 5:30 a.m.

*A **light year (l.y.)** is the distance that light travels in one year: nearly 10 million million km or 10¹³ 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 to reach the nearest star, Alpha Centauri.

EASTERN DAWN SKY IN JUNE

MATARIKI/PLEIADES INFORMATION

Eastern Dawn Sky in June 2023

This chart is intended for skywatchers who want to find the Matariki/Pleiades star cluster in the dawn sky.

The Matariki/Pleiades/Subaru cluster is quite faint. So even in a dark sky it has to be well above the horizon before it is visible. It is also easily hidden by twilight, bright moonlight and artificial light. The need for some elevation and not too much twilight means the cluster is hard to see till mid-June.

As the Earth moves around the Sun the Sun appears to move against the background stars. We can't see the stars in the daytime so the movement isn't obvious. What we see is the stars being a little further west each night. Because of the tilt of Earth's axis to its orbit the Sun's track is tilted on the sky.

At this time of year the Sun is near its most northern position, our winter solstice.

The Matariki/Pleiades cluster is near the Sun's track so it disappears into the Western evening twilight in March as the Sun approaches it. It remains hidden through April and May as the Sun passes it by.

It reappears in the eastern dawn sky as the Sun moves east of the cluster, or downward and away in our dawn-sky view.

This happens everywhere in the world as the Sun's track is near the cluster.

Because the cluster reappears in mid to late June it makes a good marker for the southern winter solstice, our shortest day.

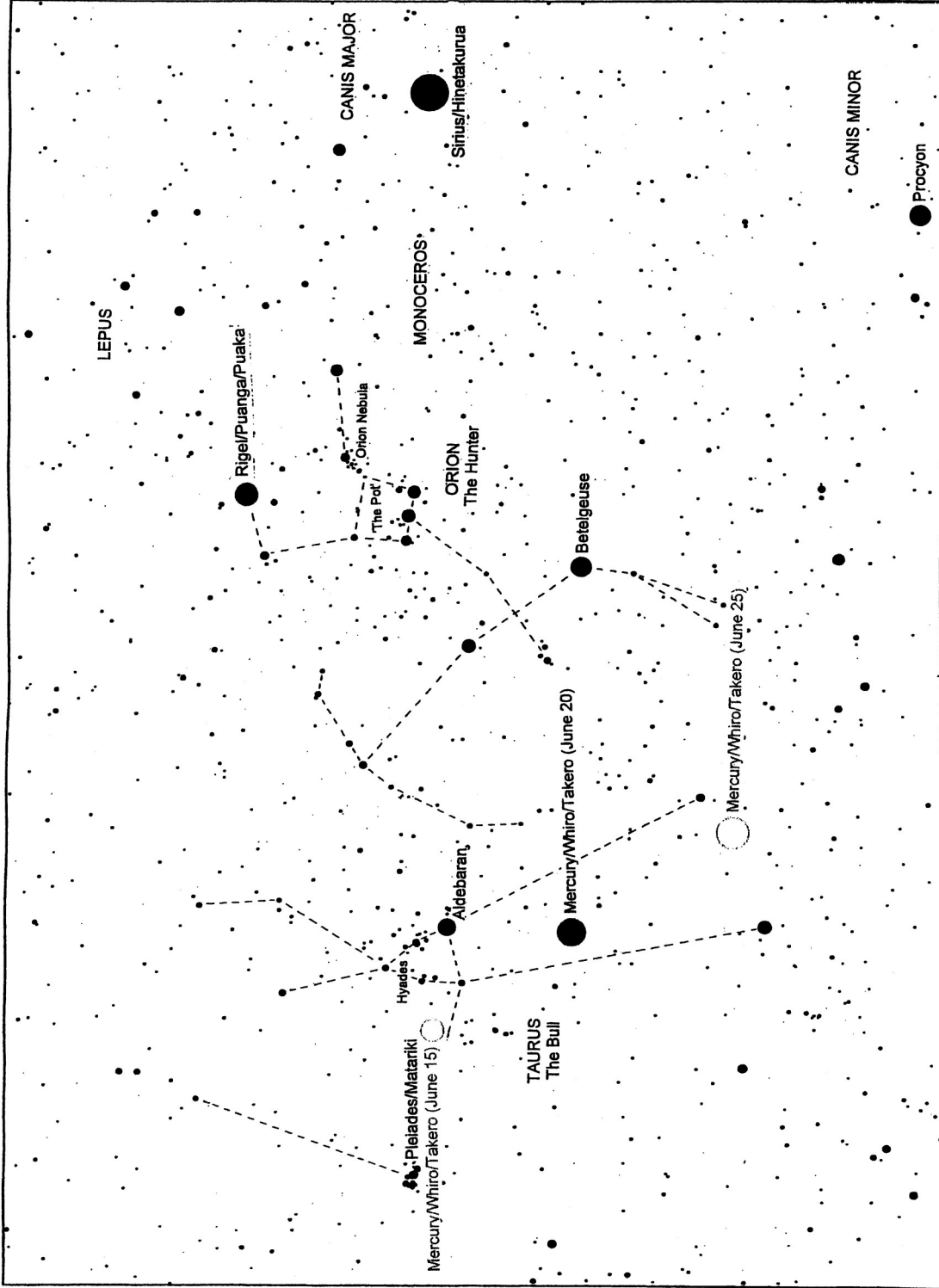
The planet Mercury/Whiro/Takero appears as a bright 'star' to the right of the Matariki cluster on June 15th. Whiro is brighter than all the true stars in the region except Hinetakarua/Sirius. Whiro slips down the sky morning-to-morning and brightens. It disappears in the dawn twilight before the 25th

The thin crescent Moon will be just above Matariki on the morning of June 16th .

Alan Gilmore 4 April 2023

Map on next page

MAP FOR EASTERN DAWN SKY IN JUNE 2023



Eastern Dawn Sky in June 2023

The chart shows the eastern sky at dawn in June 2023. Puanga /Puaka/Rigel is first up. It is followed by Hinetakurua/Sirius, Tauru/ Orion's belt and sword, a.k.a Te Kakau a Māui or The Pot, Taumata-kuku/Aldebaran and Matariki/Pleiades which all rise together. However the Matariki star cluster is faint, so it needs to be well above the horizon before it is visible to the eye. It is not seen by eye before June 14. This year the planet Mercury/Whiro/Takero is to the right of Matariki on the 15th. Mercury is brighter than all the other nearby stars except Hinetakurua/Sirius. Mercury slips lower morning to morning, disappearing in the dawn twilight before the 25th.

CAS COMMITTEE AND OFFICERS 2022/2023

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	Ray Pointon	member3@cas.org.nz

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

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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.

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: _____