



CASMAG

The official magazine of the Canterbury Astronomical Society

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

Monthly Meeting: Our Monthly Meetings are held in ER225 Ernest Rutherford Building

6.30–7.30pm - CAstronauts & Introduction to Astronomy for Beginner's

7.30 - 8pm - Refreshments

8pm - Meeting Starts

PLEASE REMEMBER TO SIGN THE ATTENDANCE BOOK AS WE STILL NEED TO KEEP A RECORD FOR CONTACT TRACING AS WELL AS USING THE NZ COVID SCAN WE HAVE AVAILABLE.

JUNE MEETING: 15th JUNE 2021

Cameron McEwing

The Secret Life of Stars

The long day ends, the skies darken, and the universe appears again. The stories of a trillion stars are carried to us on waves of light. Each star has a story to tell (some more than others) and if we take the care to listen, we can learn wondrous things. Come along to the next CAS monthly meeting, and learn about the secret lives of stars, and how to listen to the stories they tell us with their light.

CAS Membership Subscriptions for 2021

THIS YEARS MEMBERSHIP SUBSCRIPTIONS ARE NOW DUE

Please use your name and member number as a reference when banking, then email membership@cas.org.nz to advise so payments can be matched to you correctly. **PLEASE also include any changes to your details (eg: phone, email, address)**

IT IS VERY IMPORTANT THESE DETAILS ARE KEPT UP TO DATE.

Full details are included on the last page of this newsletter.

You are also welcome to pay by cash at our monthly meetings.

NOTE: We can no longer accept cheques for payments

(If you have joined Cas in the last couple of months your membership is not due till April 2022)

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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,
(see page 18 for details)

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

Dale Kershaw

From 7.2.4.6 on page 15 of Constitution of the Society

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

COMING UP IN NEXT MONTHS ISSUE

More Puzzles

Next part of A Beginners Guide to Astrophotography

CAS Calendar JULY—AUGUST 2021

JUNE 2021

Saturday 5th	New Members Training at Observatory
Monday 7th	Queens Birthday Holiday
Tuesday 8th	Committee Meeting
Thursday 10th	New Moon
Tuesday 15th	Castronauts Meeting 6.30-7.30pm
	Members Meeting at University from 7.30pm
Friday 18th	First Quarter
Saturday 19th	Mid- Winter Bonfire/Members Night at Observatory
Friday 25th	Full Moon



JULY 2021

Friday 2nd	Last Quarter
Saturday 3rd	New members training at Observatory
Saturday 10th	New Moon
	Kidsfest starts,
Tuesday 13th	Committee meeting
Saturday 17th	First Quarter
Tuesday 20th	Castronauts meeting 6.30-7.30pm
	Members Meeting at University from 7.30pm
Saturday 24th	Full Moon
	Members Night at Observatory

AUGUST 2021

Saturday 7th	New Members training at Observatory
Monday 9th	New Moon
Tuesday 10th	Committee Meeting
Monday 16th	First Quarter
Tuesday 17th	Castronauts meeting 6.30-7.30pm
	Members Meeting at University from 7.30pm
Saturday 21st	Members Night at Observatory
Monday 23rd	Full Moon
Monday 30th	Last Quarter

PUBLIC OPEN NIGHTS

Our public open night season has started and we finally held our 1st open night on Friday 4th June, We always welcome your help on these nights. We ask all who are able to help out to advise us by using

<https://cas.ivolunteer.com/2021>

Open nights this year are set as follows:

June: 4th, 11th, 18th, 25th

July: 2nd, 30th (see next page for kidsfest dates)

August: 6th, 13th, 20th, 27th

September: 3rd, 10th, 17th, 24th

Any changes to Open Nights will be published on our Facebook public page and our website. Training is always available & this works towards your accreditation



UPCOMING EVENTS: 2021 Calendar:

MID-WINTER BONFIRE/BBQ NIGHT 19TH JUNE 2021.

This is always a fun event for all the family,

Event starts from 5.30-6pm

BBQ starts from 6.30pm

The BBQ will start the evening

CAS will supply Meat/Bread/Sauces

(if you have any special diet requirements we suggest you bring your own)

Please bring a salad/hot item or desert to share with all.

You are welcome to byo drinks, *(we advise you not to drink & drive)*

Tea, Coffee, Soft drink will be supplied

We have a very large bon-fire pile ready for this night,
and of course marshmallows will be supplied,
Event will be held regardless of the weather.

We have 2 new gazebos'



We look forward to seeing all at this fun social event.



Photo from our 2018 Bonfire night

(Terry has been gathering up a huge pile of trees/brush/wood for this years bonfire and as Observatory Director has the pleasure of lighting it)

UPCOMING EVENTS: 2021 Calendar:

KIDSFEST 2021

This year it runs from **Saturday 10th -Saturday 25th July**

Excluding 13th Committee Meeting Night and 20th Members Meeting

As you can see a very busy winter season for us at CAS and we ask all who are able to help out to advise us by using

<https://cas.ivolunteer.com/kidsfest>

and keep an eye out on the forums

Remember as a Paid member of Cas you are able to attend any of our events free of charge, BUT we would love you to help out as you are

able to, Training is always available to you and this works towards accreditation on the equipment.



Changes to our Monthly Observatory Nights for 2021

Some of the observant amongst you may have noticed a change to our CAS calendar, which has been updated for our winter 2021 programme.

This year to accommodate the growing number of new members we have added an additional observatory night to our programme.

Members nights are now tagged in the calendar as Training or General:

Members Nights (Training) – held on the **1st Saturday of each month** -specifically aimed at induction training and members training. We will have accredited members onsite to support training aimed at adult and kids. Session starts earlier to allow the younger members some telescope time before bed! All members are welcome to attend and bring along gear. The intention of this session is to encourage all members to become familiar with observatory scopes and encourage usage of the observatory with a focus on training our new junior members. These sessions start earlier than normal to accommodate this.

Members Nights (General) – held on the Saturday following our Tuesday members meeting 'Free for All' – no specific training planned – All members welcome to bring along gear or use CAS gear if accredited or accredited members are in attendance.

Members nights are a great time to get out and enjoy a night under the stars at the observatory and do a little socialising. Many members bring out their dinner and enjoy that on the terraces before dark. Come out stay a while or stay all night, the observatory is warm and you can dip in and out all night as you like.

Reminder: Our members nights at the observatory go ahead regardless of the weather!

Enquiries regarding members nights can be posted on the CAS Members forum:

<https://cas.org.nz/forums/forum/canterbury-astronomical-society-forums/cas-members>

Changes to UC Members Meetings **(3rd Tuesday each month)**

From March onwards there are some changes to the members meetings at the UC to accommodate the new CASternauts kids and beginners to astronomy programme:

6.30pm – 7.30pm	CASternauts & Introduction to Astronomy for beginner's session.
7.30pm – 8pm	Tea/Coffee Break.
8pm – 9pm	Normal CAS members meeting, general business and talk by Our Guest Speaker

The earlier session is designed for our newcomers to astronomy and our kids CASternaut programme and content will be pitched at this level.

More seasoned astronomers are requested to join the 8-9pm session as spaces are limited.

Enquires about the CASternaut and beginner's session should be sent to the CAS Vice President, Simon Lewis, at vice-president@cas.org.nz

General information on our UC members nights and lecture topic will be posted in the CASMAG and on our CAS website

MONTHLY MEETINGS:

Meeting Venue:

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

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

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

Upcoming Members Meetings

**June: Cameron McEwing,
The Secret life of Stars**

July: Tbc

August: Tbc

September: Tbc

October: Tbc

November: Tbc

(correct as at 1st June 2021, 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

**PLEASE Remember we are only able to hold our meetings at the
University at Covid-19 Level 1
We will update the website if there are any changes and will host
meetings via ZOOM if possible:**

CAS YOUTUBE CHANNEL

Have a look at our new you tube channel

<https://www.youtube.com/channel/UCbLhFm7yaLUTlgH3IjvA11g>

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.

At time of printing this issue we have not had our June committee meeting, so although we welcome our new members I can not list them here till next month



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

CASMAG PUZZLE PAGE

1. The Greek goddess _____ is the equivalent of the Roman goddess Venus
2. The _____ is heavy enough to crush spacecraft
3. Venus is the only planet in the solar system named for a _____
4. The _____ greenhouse effect causes the extreme heat on Venus
5. The _____ mission sent back radar maps of the surface of Venus
6. The average temperature on Venus is about ____ hundred degrees
7. Venus rotates in the _____ direction that Earth does
8. Seen through a telescope, Venus has _____ like our Moon
9. Venus is the _____ planet from the Sun
10. Venus is so bright that it is also called the morning and evening ____
11. The clouds in Venus' atmosphere are made up of _____ acid
12. The Russian _____ mission landed on Venus.



NOTES FROM YOUR COMMITTEE

SIGNING IN WHEN YOU ARE AT THE OBSERVATORY

Please remember to sign in the book on the table in the Lodge whenever you are out at the observatory, This helps give us an idea of who has been using the equipment etc, even if you are out there to do gardening or the like PLEASE SIGN THE BOOK and add what you have been doing,

Also please note and issues that have happened or that need fixing, and its good to follow that up with a email or phone call to Terry or the committee

CAS COFFEE MUGS & PENS

With our new logo we have had Coffee Mugs printed and also Pens which we have for sale to our members,

Coffee Mugs are \$15.00 each

Pens are also available to members

Waterproof Stickers with our new logo are also available

Payment can be cash or bank deposit

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



OBSERVATORY NEWS IMPORTANT INFORMATION

DOOR CODE & ALARM AT THE OBSERVATORY

The door code and Alarm code has been changed since our March AGM
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

contact Terry (our Observatory directory via his email listed on our website or page in this casmag

CLIVE ROWE DOME REPAIRS

The repairs to the dome are now completed,

Thanks to those who assisted the build team with this big job,

See next page for photos of this work

14 INCH (CLIVE ROWE) DOME REPAIR PHOTOS



14 INCH (CLIVE ROWE) DOME REPAIR PHOTOS cont



OBSERVATORY NEWS **IMPORTANT INFORMATION**

New Security System in Lodge

We are trialling a new security system in the Lodge. 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
Terry Richardson

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
Terry Richardson



POEM FROM A GROUP VISIT

On a recent Private group booked held on our Wednesday night bookings,
We hosted a group of students from School for Young Writers along with
their tutors

They had some teaching time in the lodge and then went outside for lots of
viewing and questions, then they came back inside to have some teaching,
take some notes and to do some writing.

You can contact them on schoolforyoungwriters.org

The following has been submitted to CAS with permission to publish in our
casmag

Blinding Night

a meteor cuts through
the flesh of the night sky
a brilliant wound
tearing through the abyss
if only for a moment

Yaxin (Barbara) Zhang

Year 8

Write On School for Young Writers

Editors Note:

I was one of the volunteer's on this night and for myself I found it was
very interesting to assist with the outside observing and listen to the students
both outside and inside the lodge,

Photo:
downloaded
from Wikipedia



LUNAR ECPIPSE PHOTOS MAY 26TH 2021

Along with a group of other CAS members I was out at the observatory on the evening of May 26th for this Lunar Eclipse. It was amazing to view the event both through the scopes and sit back and look naked eye.

Photo from Euan Mason:

Eclipse from Canterbury Astronomical Society's observatory at West Melton, imaged through my C8 at prime focus, running at F6.3. Canon EOS 60D.



Photo from
David Brian:

Taken from Hornby
10 second exposure
ISO 200 f4.8 -
80mm short tube
refractor



New Zealand Astrophotography Competition From RASNZ enewsletter

The 2021 New Zealand Astrophotography Competition is now open for entries.

This year's competition will be judged by Robert Gendler, Robert is arguably one of the top deep sky astrophotographers in the world, he specializes in images of deep sky objects with very long exposure times.

For more information on our judge please take a look at his work on his website at <http://www.robgendlerastropics.com/>

The competition has three main categories deep sky, nightscape and solar system, last year we introduced a new time-lapse category but this year we have decided to tweak the rules of this new category so make sure you read over the rules and conditions of entry before submitting your entries. See below.

As in previous years the competition is sponsored by the Australian Sky & Telescope magazine, with a free 12 month subscription to their fine magazine to the winners of the nightscape and deep sky categories, as well as having their images printed in the magazine.

We are also lucky to be sponsored by Celestron Australia who are providing a \$500 Celestron Australia Voucher to be spent on the Celestron Australia Website for the winner of the Deep Sky Category.

And sponsorship from Sky-Watcher Australia who are sponsoring the overall winner of the competition with a \$500 NZD Sky-Watcher Australia Voucher to be spent on the Sky-Watcher Australia Website.

Astronz are sponsoring the Solar System category with a \$300 Astronz gift voucher, Astronz is easily New Zealand's best known and most trusted supplier of Astronomical equipment.

The Auckland Astronomical Society will also provide a cash prize for each category winner.

The competition cutoff date is the 21st of September and the competition awards will be announced at the annual Burbidge dinner which is the Auckland Astronomical Society's premier annual event, keep an eye out on the society website for details on the forthcoming Burbidge dinner.

Conditions of entry and entry forms can be downloaded from the Auckland Astronomical Society website here at <https://www.astronomy.org.nz/announcing-the-2021-new-zealand-astrophotography-competition-for-the-harry-williams-trophy/> "

-- From Jonathan Green, Director of the RASNZ Astrophotography Section, for the Auckland Astronomical Society.

TABLE OF SOUTHERN METEOR SHOWERS 2021

Shower	Dates		Moon	Peak Rate	RA	Dec	Near Star
	Active	Peak	2021				
Centaurids	Jan 28 - Feb 21	Feb 8	3 days after Last quarter	5 (-25)	14.1	-59	β Cen
gamma-Normids	Feb 25 - Mar 22	Mar 13	New moon	8	16.6	-51	γ Nor
pi-Puppids	Apr 15 - Apr 28	Apr 23	3 days after First quarter	var to 40	7.3	-45	σ Pup
eta-Aquariads	Apr 19 - May 28	May 5	1 day after Last quarter	60	22.5	-1	η Aqr
Pisces Austrinids	Jul 15 - Aug 10	Jul 27	3 days after Full moon	5	22.7	-30	α PsA
alpha-Capricornids	Jul 3 - Aug 15	Jul 30	2 days before Last quarter	4	20.5	-10	α Cap
Southern delta-Aquarids	Jul 15 - Aug 25	Jul 27	5 days before Last quarter	20	22.6	-16	δ Aqr
Southern iota-Aquarids	Jul 25 - Aug 15	Aug 4	3 days after Last quarter	2	22.3	-15	ι Aqr
Northern delta-Aquarids	Jul 15 - Aug 25	Aug 13	3 days before First quarter	4	22.3	-5	θ Aqr
Northern iota-Aquarids	Aug 11 - Aug 31	Aug 19	3 days after First quarter	3	21.8	-6	β Aqr
Piscids	Sep 1 - Sep 30	Sep 19	2 days before Full moon	3	0.3	-1	λ Psc
Orionids	Oct 2 - Nov 7	Oct 21	Full moon	20	6.3	+16	γ Gem
Leonids	Nov 14 - Nov 21	Nov 17	2 days before Full moon	100+	10.2	+22	γ Leo
alpha-Monocerotids	Nov 15 - Nov 25	Nov 22	3 days after Full moon	var to 5	7.9	+1	δ Mon
Pheonids	Nov 28 - Dec 9	Dec 6	2 days after New moon	var	1.2	+53	Achernar
Geminids	Dec 7 - Dec 14	Dec 14	3 days after First quarter	120	7.3	+33	Castor

2021 Conference and RASNZ Centenary

NEW DATES SET FOR 2021 CONFERENCE

After the 2020 planned RASNZ Conference was postponed then changed to an online presentation due to Covid-19 restrictions,

RASNZ has announced

Planning is underway to hold our AGM and Conference over the weekend of 9 to 11 of July 2021 in Wellington.

Please send your suggestions to the SCC at conference@rasnz.org.nz.

Conference registrations and more information at www.rasnz.org.nz

The Evening Sky in June 2021

Venus is the brilliant 'evening star' appearing low in the northwest soon after sunset. It sets an hour after the Sun at the beginning of the month; two hours after the Sun at the end. (It sets before 8 pm so isn't shown on the chart.) In a telescope Venus is a small white disk. It is on the far side of the Sun from us, 230 million km away, slowly catching up. The Moon will be near Venus on the 12th.

Mars is in the northwest at dusk. It is a little fainter than the brightest stars around it so its reddish colour might not be obvious. It sets soon after 8 pm. It is 350 million km away mid-month, so tiny in a telescope.

Saturn rises in the southeast in the later evening, around 10 pm at the beginning of the month; around 8 at the end. It is the only bright 'star' in that empty region of sky. It is followed by **Jupiter** less than two hours later (so not on the chart). Jupiter is much brighter than Saturn and shines with a steady golden light. It is the brightest 'star' in night sky. By dawn Jupiter and Saturn are northwest of the zenith. The Moon will be near Jupiter on the night of June 1-2. At the end of the month the Moon is near Saturn on the 27-28th and near Jupiter on the morning of the 29th.

Sirius, the brightest true star, appears in the west soon after sunset. It sets in the southwest around 9 pm, mid-month, twinkling like a diamond. Sirius appears bright both because it is 20 times brighter than the sun, and because it is relatively close at nine light years*. **Canopus**, the second brightest star, is in the southwest. It is a truly bright star, 310 light years away and 13,000 times brighter than the sun. Canopus is a 'circumpolar' star: it circles the South Celestial Pole (SCP on the chart) clockwise but never sets from Aotearoa/NZ.

Arcturus is the brightest star in the north sky. Its orange light is often split into red and green when it is low in the sky. Arcturus is relatively close at 37 light-years from the Sun. It appears bright because it is 170 times brighter than the Sun. It is the same mass or weight as the Sun but is much older, around 7.1 billion years old. The Sun is 4.5 billion years old. Arcturus has used up the hydrogen fuel in its core and is now converting helium into heavier elements. The hotter core has made the star expand into a red giant, 25 times wider than the Sun. The Sun will evolve in the same way in about three billion years.

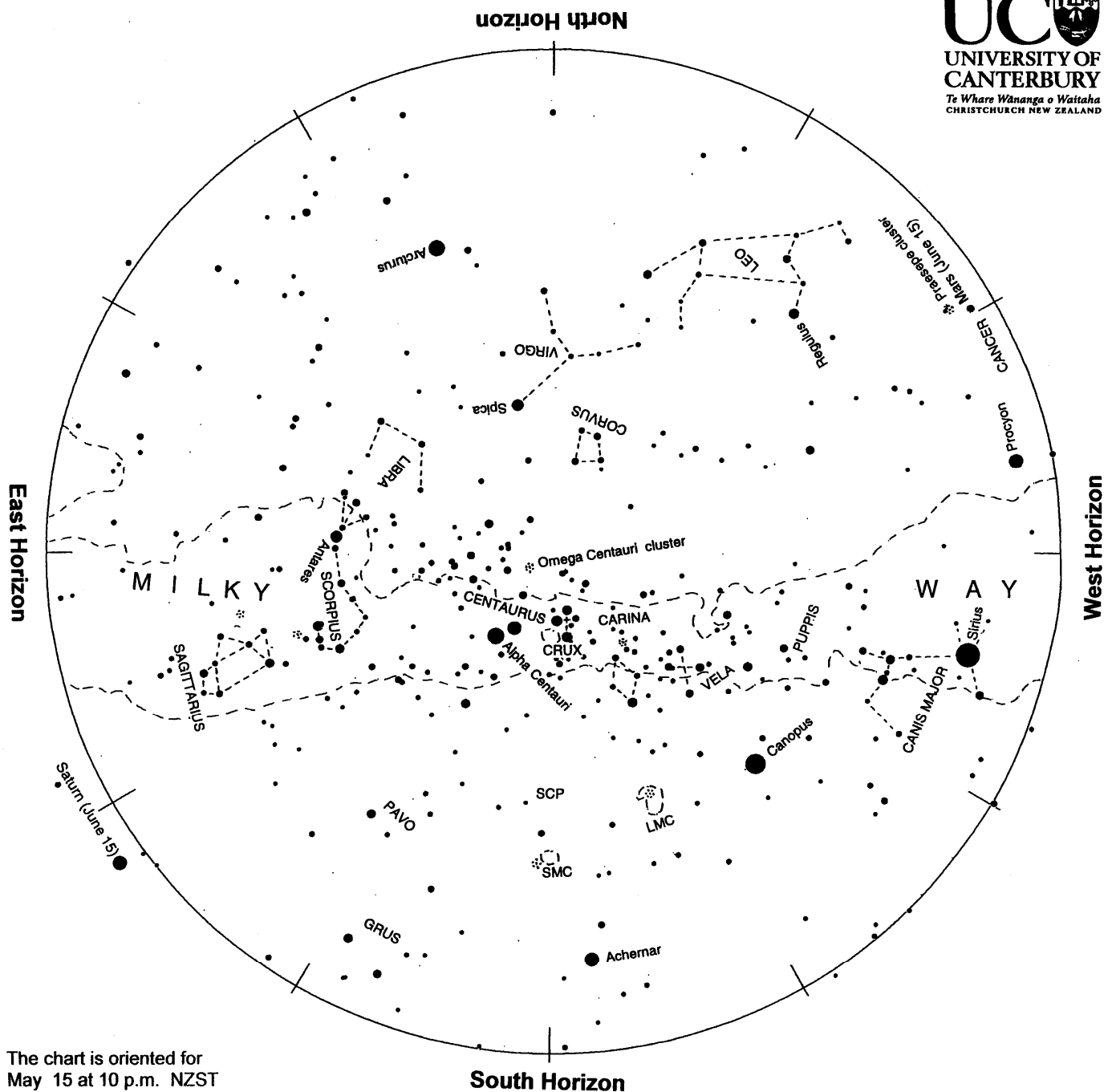
Crux, the Southern Cross, is south of the zenith. Beside it, and brighter, are Beta and **Alpha Centauri**, often called 'The Pointers' because they point at Crux. Alpha Centauri is the closest naked-eye star, 4.3 light years away. Beta Centauri and many of the stars in Crux are hot, extremely bright blue-giant stars hundreds of light years away.

Orange **Antares**, high in the eastern sky, marks the body of Scorpius the scorpion. It is a red giant star: 600 light years away and 19 000 times brighter than the sun. The scorpion's tail, upside down, curves off to the right. Below Scorpius is **Sagittarius**, its brighter stars making 'the teapot'.

The **Milky Way** is brightest and broadest in the southeast toward Scorpius and Sagittarius. It remains bright but narrower through Crux and Carina then fades in the western sky. The Milky Way is our edgewise view of the galaxy, the pancake of billions of stars of which the sun is just one. The thick hub of the galaxy, 30 000 light years away, is in Sagittarius. A scan along the Milky Way with binoculars will find many clusters of stars and some glowing gas clouds. Relatively nearby dark clouds of dust and gas look like holes and slots in the Milky Way. The dust, more like smoke, comes from old red-giant stars like Antares. These clouds eventually coalesce into new stars.

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

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



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

Evening sky in June 2021

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.

Brilliant Venus appears low in the northwest soon after sunset but sets before 8 pm so isn't on the chart. Mars is low in the northwest but faint. It sets soon after 8. Sirius, the brightest true star, twinkles colourfully in the west. Canopus is in the southwest. South of overhead are the Pointers, Alpha and Beta Centauri, with the Southern Cross (Crux) to their right. Orange Arcturus, is low in the north, often twinkling red and green. Saturn appears in the empty sky in the southeast. It rises before 10 at the beginning of June; before 8 at the end. It is followed by Jupiter, much brighter.

CAS COMMITTEE AND OFFICERS 2021/2022

Public Nights and Group Bookings		bookings.liaison@cas.org.nz
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For more specialized information please see the contact information page on www.cas.org.nz

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Canterbury Astronomical Society Inc.

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City East

Christchurch 8141

Web: www.cas.org.nz

Canterbury Astronomical Society Facebook Group:

www.facebook.com/groups/CanterburyAstronomicalSociety

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

CAS Members Meetings:

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

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

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

Members Nights at the Observatory are detailed on our website

Observatory Members Nights:

Cas holds these nights as follows

Members Nights (Training) on the 1st Saturday of the month

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

CAS on Facebook:

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

CAS Membership:

Subscriptions are due 1st April each year

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

Full details are included on our website.

Contributions to CASMAG:

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

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

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

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

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

The Constitution of The Canterbury Astronomical Society Inc:

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

DISCLAIMER:

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

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

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Canterbury Astronomical Society Inc

APPLICATION FOR MEMBERSHIP

To: Membership Secretary
 Canterbury Astronomical Society Inc.
 P.O.Box 25-137
 City East
 Christchurch 8141



Applicants Name in Full _____

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

Home Phone: _____ Cell Phone: _____

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

Membership Category (*tick, subscripton must accompany application*)

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

<input type="checkbox"/>	Adult (any person 18years of age or over who is not 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 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: _____