



# CAS MAG

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: TUESDAY 19TH FEBRUARY 2019**

From 7:30p.m, room 701 on the 7th floor of the West building (Old Rutherford) (Physics and Astronomy) at the University of Canterbury (see page 4 for a detailed map).

Refreshments start at 7.30. Meeting starts at 8pm

## **FEBRUARY MEETING: ANTHONY POWELL**

**(FROZEN SOUTH.COM)**

**(NOTE: VENUE CHANGE to C2 LECTURE THEATRE)**

Anthony Powell has just spent his tenth winter over in Antarctica. He worked for many years as a telecommunications engineer before becoming a full-time filmmaker and photographer. He had to design and build a lot of his own camera equipment to withstand the harsh conditions of the deep Antarctic winters.

He made the international award-winning film "Antarctica: A Year on Ice" and has contributed footage to numerous films, TV shows, and exhibitions.

These include National Geographic, Discovery, US Natural History Museum, and the Emmy Award winning BBC series Frozen Planet.

***YOUR CAS COMMITTEE WISH YOU  
ALL A VERY MERRY CHRISTMAS  
AND A HAPPY NEW YEAR.  
LOOK FORWARD TO SEEING YOU  
IN 2019***



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**CAS Calendar, DECEMBER 2018- MARCH 2019****December 2018**

Sunday 16th	First quarter
Sunday 23rd	Full Moon
Tuesday 25th	Christmas Day
Wednesday 26th	Boxing Day
Saturday 29th	Last Quarter
Monday 31st	New Years Eve

**January 2019**

Tuesday 1st	New Years day
Sunday 6th	New Moon
Monday 14th	First Quarter
Saturday 19th	Members Night at Observatory
Monday 21st	Full Moon (SUPER FULL MOON)
Monday 28th	Last Quarter

**February 2019**

Tuesday 5th	New Moon (MICRO NEW MOON)
Wednesday 6th	Waitangi Day
Tuesday 12th	Committee Meeting
Wednesday 13th	First Quarter
Tuesday 19th	Members Meeting from 7.30pm
Wednesday 20th	Full Moon (SUPER FULL MOON)
Saturday 23rd	Members night at Observatory
Wednesday 27th	Last Quarter

**March 2019**

Thursday 7th	New Moon
Tuesday 12th	Committee Meeting
Thursday 14th	First Quarter
Tuesday 19th	Annual General Meeting from 7.30pm
Thursday 21st	Full Moon
Saturday 23rd	Members Night at Observatory
Thursday 28th	Last Quarter

## **UPCOMING EVENTS:**

### **PUBLIC OPEN NIGHTS 2019**

The dates for 2019 Open Nights will be confirmed by the committee at the February meeting and advised to you.

Daylight saving ends on 7th April 2019,

### **KIDSFEST 2019**

Provisional dates for this are Saturday 6th July—Saturday 20th July

Excluding both Tuesday's 9th and 16th,

More information in your Feb CASMAG

As in the past years your support and help with these events are what makes them the huge success that they are

### **CAS AGM**

This is at our March meeting and is when your committee present their annual reports and the election of committee officers takes place,

If you have an interest in becoming a committee member please let 1 of the current committee know, or if you have any questions,

Committee contact details are on our website, or you can ring Dale on 9806057(afternoons/evenings please).



### **STARDATE SOUTH ISLAND 2019**

The date has been set for this,  
It is the weekend of Friday 8th–  
Sunday 10th February 2019

Put this date in your calendar.

The website has some details  
<https://www.treesandstars.com/stardate/>

Or if you have any questions etc  
email Euan at [president@cas.org.nz](mailto:president@cas.org.nz)



## **CAS Membership Subscriptions for 2019-2020**

### **NEXT YEARS SUBSCRIPTIONS WILL BE DUE FOR PAYMENT IN APRIL NEXT YEAR 2019**

Please use your name and member number as a reference when banking, then email [membership@cas.org.nz](mailto:membership@cas.org.nz) to advise so payments can be matched to you correctly.

PLEASE also include any changes to your contact details (eg: phone, email, address)

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

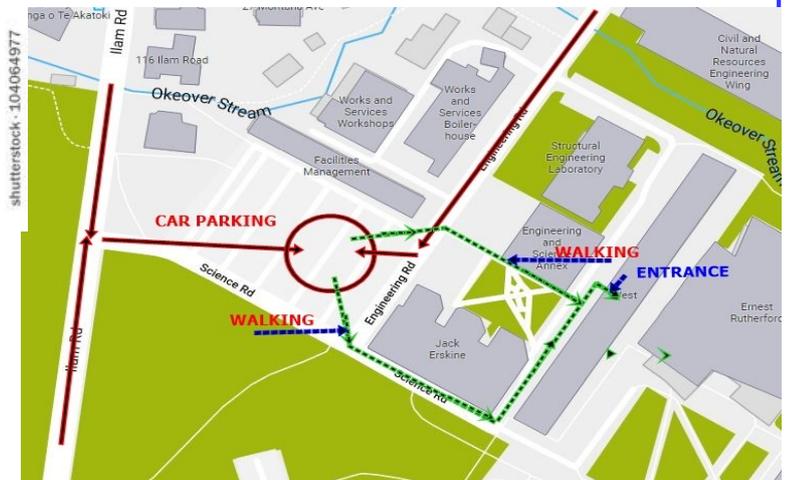
You are also welcome to pay by cash or cheque at our monthly meetings



## MONTHLY MEETINGS:

Carol Mc Alavey has again been busy organising speakers for this coming year, If you have any suggestion for topics please contact Carol via [cstars@xtra.conz](mailto:cstars@xtra.conz)  
The meeting venue is now held in room 701 on the 7th floor of the West building (Old Rutherford) (Physics and Astronomy) of the University of Canterbury  
Car parking is available in the car park with entrances in Science Road or Engineering Road.

Disabled parking is in Engineering Rd



## Upcoming Guest Speakers:

### DECEMBER 2018

No Meeting

### JANUARY 2019

No Meeting

### 19th FEBRUARY 2019

### (NOTE: VENUE CHANGE to C2 LECTURE THEATRE)

Anthony Powell

"Antarctic Skies and Photography"

(see page 6 for more information on his work)

### 19th MARCH 2019

CAS AGM

The Dates for the rest of 2019 are listed here.

### 16th APRIL 2019

### 21st MAY 2019

### 18th JUNE 2019

### 16th JULY 2019

### 20th AUGUST 2019

### 17th SEPTEMBER 2019

### 17TH OCTOBER 2019

### 19TH NOVEMBER 2019

(correct as at 19th December 2018, Subject to change as required)

Many thanks go to Orlon Petterson and Rosalie Reilly 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



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## **WELCOME TO OUR NEW MEMBERS:**

A warm welcome to our new members, We look forward to meeting you at our meetings or events, Please make yourselves known to others. It has be great to see our new members coming along to our open nights and meetings,



## **NEW ZEALAND STARLIGHT CONFERENCE** **October 2019**

We are planning a conference on Dark Skies, Combatting Light Pollution and Star Gazing to be held at Lake Tekapo in the worlds largest International Dark Sky Reserve, (see <http://starlightconference.org/>)

The Dates will be 6pm on Sunday 20th October 2019 till 4.30pm on Wednesday 23rd October 2019.

The New Zealand Starlight Conference is supported by the International Dark Sky Association and Hosted by Aoraki Mackenzie International Dark Sky Reserve Board.

More details will be posted on the website above in the coming months, Members of RASNZ and Affiliated societies will be most welcome as participants

We hope to see many New Zealanders at the conference

John Hearnshaw (Chair of AMIDSR Board)

## **February 2019 Members Meeting Speaker Information** **(NOTE: VENUE CHANGE to C2 LECTURE THEATRE)**

ANTHONY POWELL (FROZEN SOUTH.COM)

Anthony Powell has just spent his tenth winter over in Antarctica. He worked for many years as a telecommunications engineer before becoming a full-time filmmaker and photographer. He had to design and build a lot of his own camera equipment to withstand the harsh conditions of the deep Antarctic winters.

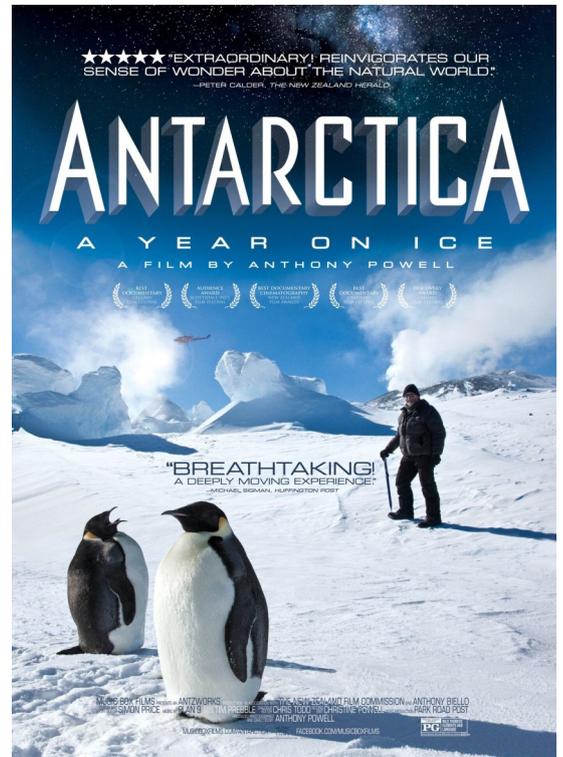
He made the international award-winning film "Antarctica: A Year on Ice" and has contributed footage to numerous films, TV shows, and exhibitions.

These include National Geographic, Discovery, US Natural History Museum, and the Emmy Award winning BBC series Frozen Planet.

Thanks again to Carol for organising this wonderful speaker for our meetings)



Images from Anthony Powell



### **From Your Editor**

I hope you all have a very happy and safe festive season however you spend the time.

Remember you can have your advert added in the future casmag's, Contact me for detail's

As always I look forward to receiving your items to include in future issues and I welcome contributions or suggestions and encourage you to send any articles or ideas you would like to be see included in upcoming issues.

Please email to [editor@cas.org.nz](mailto:editor@cas.org.nz)

Dale Kershaw

## OBSERVATORY NEWS

### ALARM AT THE OBSERVATORY

The installation of our ALARM at the observatory is now fully operational, Ask a committee member for the password.



## ONGOING WORK AT OBSERVATORY

### Retaining Wall Construction

Terry and a small group of members have been working hard on this project over the last few weeks and its now almost completed,

Many thanks to those who came out and helped

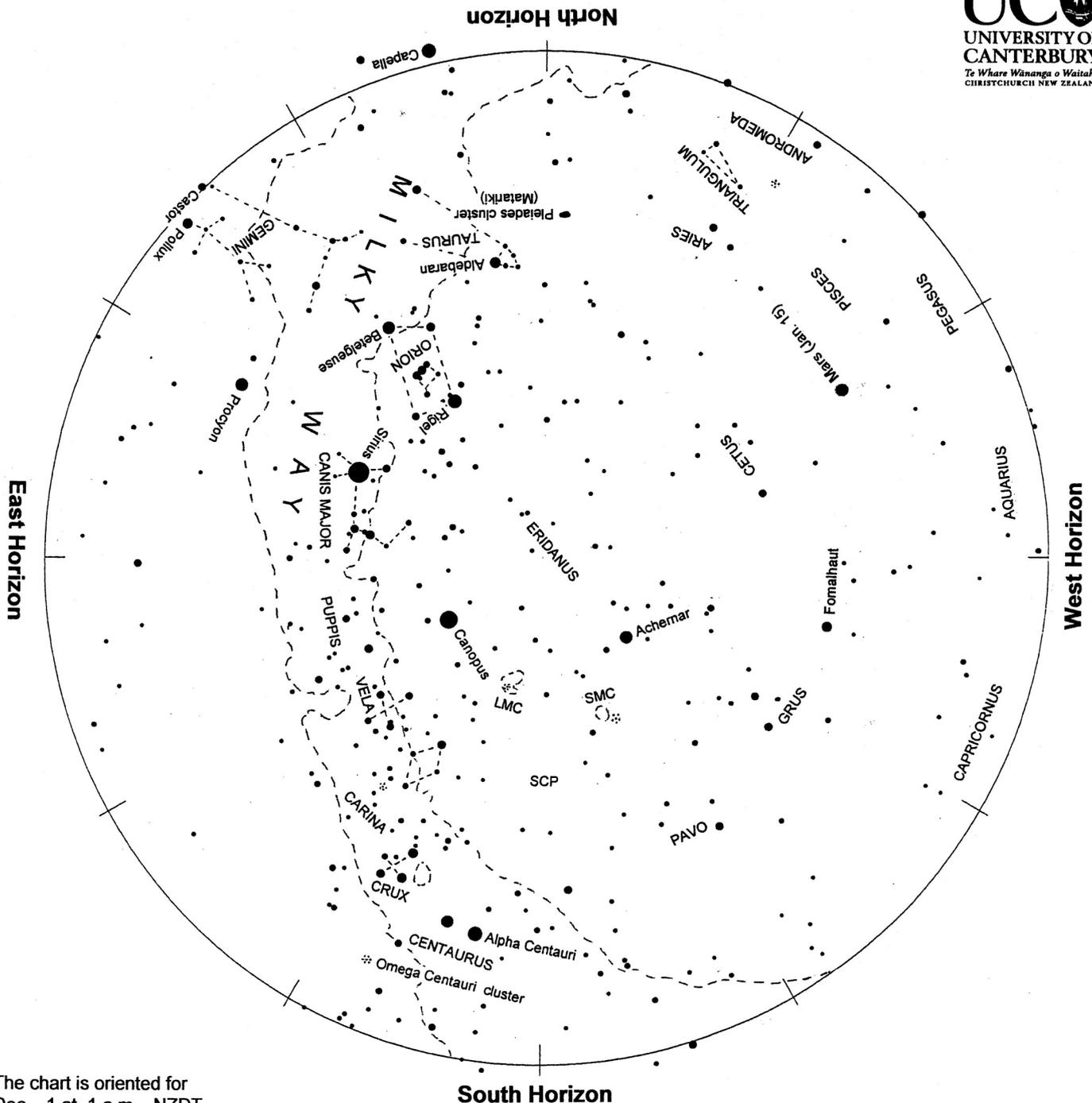
## CAS CHRISTMAS BBQ

We held this on the 1st December and we invited some of our close neighbours, several of them came along and it was good to meet them, and for them to see what that place over the road does, Great food and chats were had by all who came along. Our next BBQ is out mid-winter in June

## TREES

The next working bee project is trimming the trees around the observatory and notices will be posted on our website, keep an eye out and come along and help if you can, the more who help the quicker its done.





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

### Evening sky in January 2019

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 north then have 'North horizon' at the lower edge. As the earth turns the sky appears to rotate clockwise around the south celestial pole (SCP on the chart). Stars rise in the east and set in the west, just like the sun. The sky makes a small extra clockwise or westward rotation from night to night as we orbit the sun.

Sirius, the brightest star, is high in the east at dusk. Left of it is Orion, containing 'The Pot', with Taurus and the Pleiades/Matariki star cluster further left toward the north. Canopus, the second brightest star after Sirius, is southeast of the zenith. Crux, the Southern Cross, and the Pointers are low in the south. From northern New Zealand the bright star Capella is near the north skyline. Mars appears as a medium-bright reddish star low in the northwest. Bright planets are in the pre-dawn sky.

## The Evening Sky in January 2019

Bright stars appear in the eastern half of the evening sky in January. There are no really bright planets. **Mars** appears as a medium bright reddish star all by itself low in the northwest.

**Sirius**, the brightest star, appears high in the east at dusk. Called 'the Dog Star' it marks the head of **Canis Major** the big dog. A group of stars to the right of it make the dog's hindquarters and tail, upside down just now. 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. **Procyon**, in the northeast below Sirius, marks the smaller of the two dogs that follow Orion the hunter across the sky.

Left of Sirius as the sky darkens are **Rigel** and **Betelgeuse**, the brightest stars in **Orion** the hunter. Between them, but fainter, is a line of three stars making Orion's belt. **Rigel** is a bluish supergiant star, 70 000 times brighter than the sun and much hotter. It is 800 light years away. Orange **Betelgeuse**, below Orion's belt, is a red-giant star, cooler than the sun but hundreds of times bigger: a ball of extremely thin hot gas. To southern hemisphere star watchers, Orion's belt makes the bottom of 'The Pot' or 'The Saucepan'. A faint line of stars above and right of the belt is the pot's handle or Orion's sword. It has a glowing cloud at its centre: the Orion Nebula.

Left of Orion is the V-shaped pattern of stars making the face of **Taurus** the Bull. The V-shaped group is called the Hyades cluster. It is 150 light years away. Orange **Aldebaran**, making one eye of the bull, is not a member of the cluster but on the line of sight, at half the cluster's distance.

Left again, toward the north and lower, is the **Pleiades/Matariki/Seven Sisters/ Subaru** star cluster. Pretty to the eye and impressive in binoculars, it is 440 light years from us. From northern New Zealand the bright star **Capella** is on the north skyline. It is 90,000 times brighter than the sun and 3300 light years away.

Low in the south are **Crux**, the Southern Cross, and 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 very luminous and distant: 13 000 times brighter than the sun and 300 light years away.

The **Milky Way** is in the eastern sky, brightest in the southeast toward Crux. It can be traced towards the north but becomes faint below Orion. The Milky Way is our edgewise view of the Galaxy, the pancake of billions of stars of which the sun is just one. Binoculars show many star clusters and a few glowing gas clouds in the Milky Way, particularly in the Carina region. The Milky Way is faint left, or north, of Orion because we are looking toward its thin outer edge. The centre region of the Galaxy, in Sagittarius, is hidden by the sun at this time of year.

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

The bright planets are in the morning sky, so not on the chart. Brilliant Venus rises around 3:30 a.m. through the month. Golden Jupiter appears about an hour later at the beginning of the month. Jupiter rises earlier each morning so catches up with Venus. Around the 22nd the two planets will be rising together. After that Jupiter will move higher than Venus. At the end of the month Saturn rises in the southeast around 4:30 looking like a medium-bright star.

The thin crescent Moon will be near Venus on the morning of the 2nd. Venus is bright enough to see in daylight if you can focus on infinity. So if you can find the Moon in the mid-morning sky -- at 10 a.m. it will be almost due north and 60° up the sky -- then you will immediately see Venus above it. On the morning of February 1st they will be even closer together.

\*A **light year** 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.

## CAS Committee and Officers 2018/2019

Public Nights and Group Bookings

President	Euan Mason
Vice President	Rob Glassey
Treasurer	David Brian
Secretary	Spencer Lintott
Observatory Director	Terry Richardson
Editor	Dale Kershaw
Membership Secretary	Christina Lewis
Librarian	Colin Fortune
Web Master	Simon Lewis
Committee Members	Graeme Kershaw Carol McAlavey Malcolm Flain

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For more specialized information see the contact information page on [www.cas.org.nz](http://www.cas.org.nz)

### CAS Contact Information

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Victoria Street Post Office

Christchurch 8144

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

CanterburyAstronomicalSocietyFacebook 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 meeting is currently held from 7:30pm onwards every third Tuesday of the month (except December and January), in room 701 on the 7th floor of the West building (Old Rutherford) (Physics and Astronomy) of the University of Canterbury

Any member of the public who is considering joining the Society is most welcome to attend the meeting.

### CAS on Facebook

CAS has a facebook presence. Useful to keep in touch for when your planning to head out to the observatory, asking other members for advice and or post interesting information. Follow the link listed in the contact information and request to join us.

### CAS on Twitter

CAS has a Twitter presence at <https://twitter.com/canterburyastro>

### CAS Membership

Subscriptions are due 1st April.

Fees for current members who renew before 31 May, are at the discounted price shown on the membership form included on the back page of this casmag Full details are included on our website

### Contributions to CASMAG

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

Please submit articles to email to [editor@cas.org.nz](mailto:editor@cas.org.nz)

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

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

Charges for larger items range from \$5 to \$40; email the editor for full details

### The Constitution of The Canterbury Astronomical Society Inc

This can be found on our website via this link

<https://www.cas.org.nz/files/file/3-the-constitution-of-the-canterbury-astronomical-society-inc/>

### 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.  
 P.O.Box 25-137  
 Victoria Street  
 CHRISTCHURCH 8144



Applicant's name in full (Block letters): \_\_\_\_\_

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*)

**Discounted if membership is renewed before 31 May**

**Online banking details (Please identify your payment):** 03 0802 0098273 00

	Discounted	Full
<input type="checkbox"/> Adult (any person 18 years of age or over who is not eligible for any other category)	\$70	\$80
<input type="checkbox"/> Family (two or more persons living at the same address) §	\$105	\$120
<input type="checkbox"/> Junior (under 18 years of age on 1 April of the current year)	\$35	\$40
<input type="checkbox"/> Senior (over 65 years)	\$35	\$40
<input type="checkbox"/> Community Services Card Holder	\$35	\$40
<input type="checkbox"/> Student (any person studying full-time at a tertiary institution; must reapply annually)	\$35	\$40
<input type="checkbox"/> Corporate (members have voting rights of one member but cannot take office)	\$210	\$240

§ If family membership, please list the other persons involved.

Name	Date of birth (if under 18)	Signature

All CAS members receive CASMag, a monthly newsletter. Would you prefer to receive this (please tick):

by email as a .pdf attachment?       or by post as a hard copy?

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. A copy of the Constitution may be downloaded from [http://www.cas.org.nz/constitution/CAS\\_constitution.pdf](http://www.cas.org.nz/constitution/CAS_constitution.pdf).

Date Approved: