



# 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**

This month's meeting is to be held in C2 LECTURE THEATRE

Tickets are free and need to be booked online via

[www.eventbrite.com/e/an-evening-with-anthony-powell-frozen-south-tickets](http://www.eventbrite.com/e/an-evening-with-anthony-powell-frozen-south-tickets)

This event is a joint event with CAS and University of Canterbury

## **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.

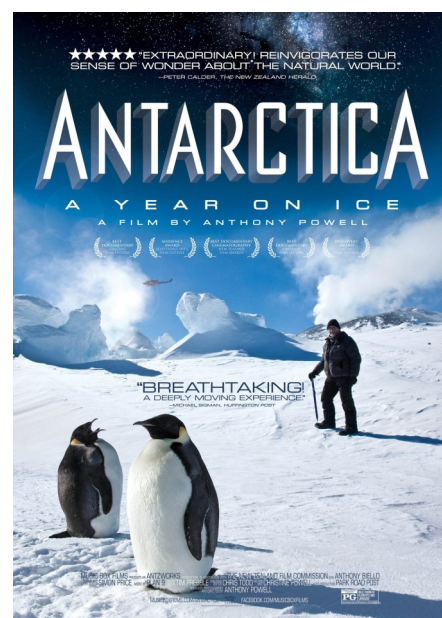
He made the international award-winning film "Antarctica: A Year on Ice" and has contributed footage to numerous films, TV shows, and exhibitions.

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

Images from Anthony Powell



This is a combined hosted event with CAS and University of Canterbury  
Free tickets to be booked online  
See our website or facebook page for the link to eventbrite



### IN THIS MONTHS ISSUE

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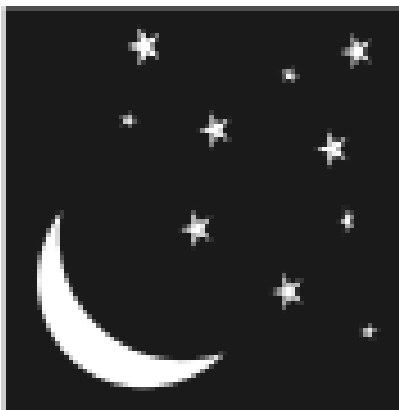
### CAS Calendar, FEBRUARY 2019 – MARCH 2019

#### February 2019

Tuesday 5th	New Moon (MICRO NEW MOON)
Wednesday 6th	Waitangi Day
Friday 8th	South Island Stardate
Saturday 9th	Stardate continues
Sunday 10th	Stardate finishes mid afternoon (Approx)
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

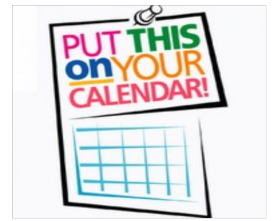
As in the past years your support and help with these events are what makes them the huge success that they are

### **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.

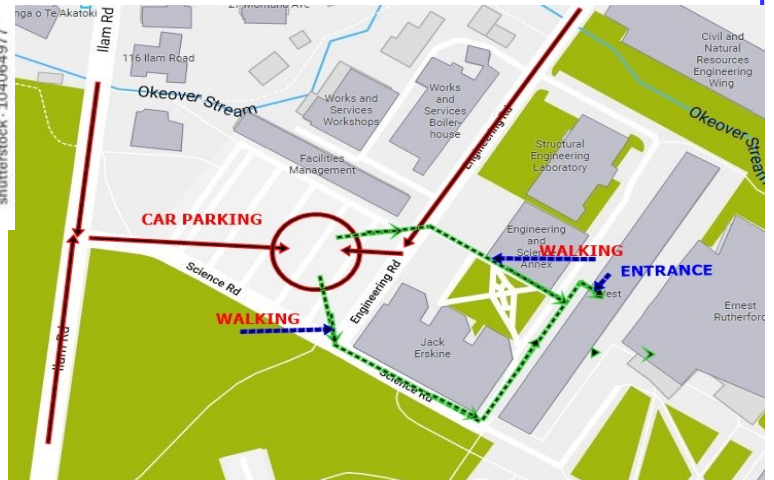
You are also welcome to pay by cash or cheque at our monthly meetings



## **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:**

**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 5th February 2019, 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,



### **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.

## **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)

## **RASNZ 2019 Conference - New Plymouth 17 - 19 May 2019**

The RASNZ 2019 Conference will be held in New Plymouth 17 - 19 May and will be followed by the 13th Trans-Tasman Symposium on Occultations. The conference is being hosted by the New Plymouth Astronomical Society as part of their 100th celebrations and will be held at the Devon Hotel.

More information will be available here as planning for the event progresses. We look forward to seeing you in New Plymouth

The RASNZ AGM will take place on the afternoon of Saturday 18 May 2019 following the last conference session of the day.

Check the RASNZ website for registration details

<http://www.rasnz.org.nz/groups-news-events/conf-next>



**New Plymouth  
Astronomical Society**

### **From Your Editor**

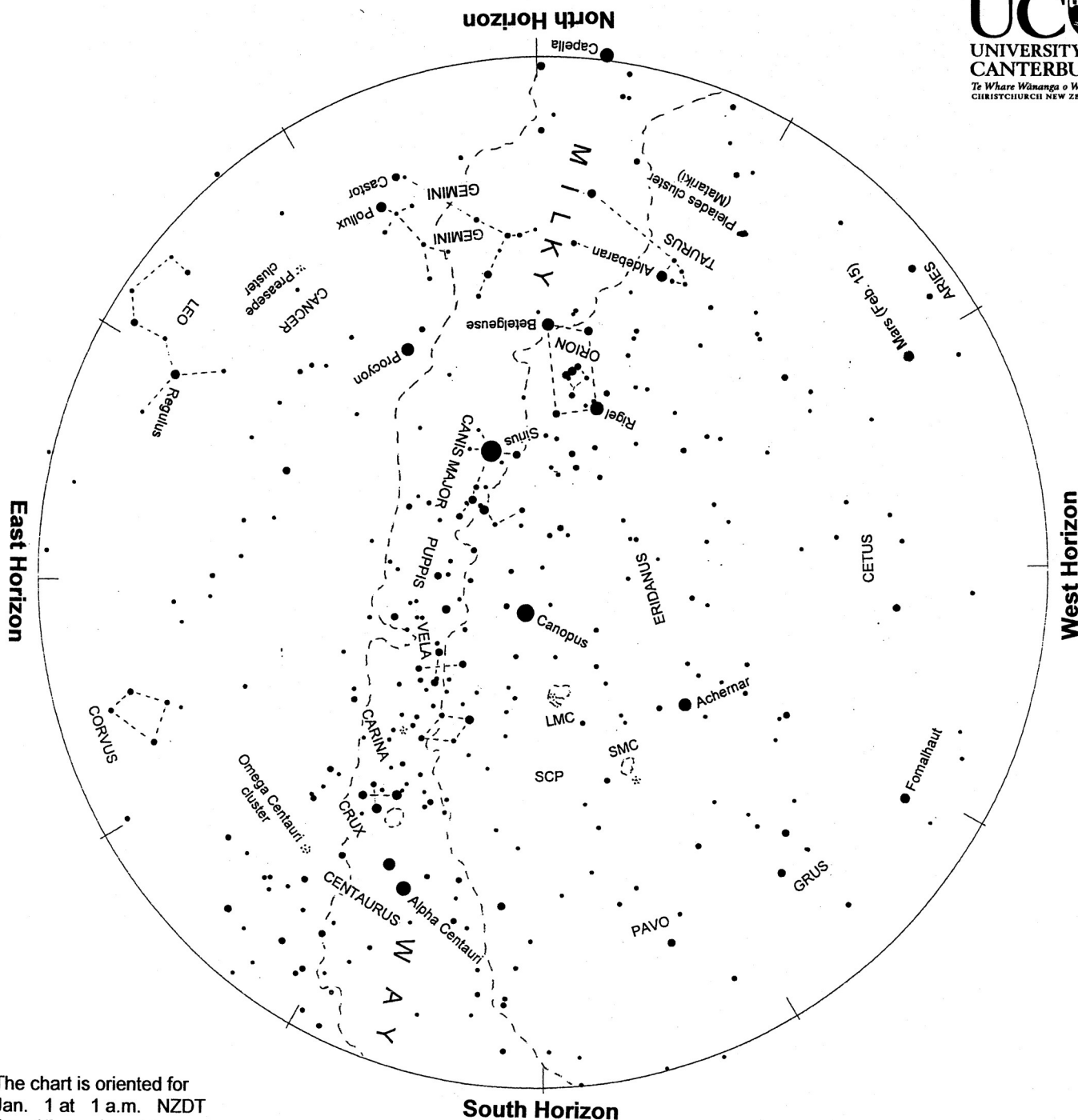
I hope you everyone had a happy and enjoyable holiday time however you spend the time.

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



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

### Evening sky in February 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 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.

Sirius, the brightest star, appears north of overhead at dusk. Canopus, the second brightest star, is south of the zenith. Orion, containing 'The Pot', is midway up the north sky. Below and left of Orion are Taurus and the Pleiades/Matariki star cluster. The Southern Cross and Pointers are midway up the southeast sky. The Clouds of Magellan, LMC and SMC, two nearby galaxies, are high in the south sky. Mars is the only naked-eye planet in the evening sky. It looks like a medium-bright reddish star low in the northwest, setting around 11 p.m. Bright planets are in the morning sky.



## The Evening Sky in February 2019

**Sirius** and **Canopus** are the brightest in the evening sky. Sirius, the brightest of all the stars, is north of overhead. Canopus, the second brightest star, is a bit south of overhead. Both stars are white in colour.

**Sirius**, 'the Dog Star', marks the head of **Canis Major** the big dog. A group of stars above and right of it make the dog's hindquarters and tail, upside down. **Procyon**, in the northeast below Sirius, marks the smaller of the two dogs that follow Orion the hunter across the sky. Sirius is eight light years\* away.

Below and left of Sirius are bluish **Rigel** and orange **Betelgeuse**, the brightest stars in **Orion**. Between them is a line of three stars: Orion's belt. To southern hemisphere star watchers, the line of three makes the bottom of 'The Pot'. The handle of The Pot is Orion's sword, a fainter line of stars above the bright three. At its centre is the Orion Nebula; a glowing gas cloud around 1300 light years away.

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

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

**Mars** is the only naked-eye planet in the evening sky. It looks like a medium-brightness reddish star on its own low in the northwest. Mars sets more than two hours after the sun all month. At mid-month Mars is 250 million km away on the far side of the sun so appears small in a telescope. The moon will be left of Mars on the 10th and above it on the 11th.

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

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

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

The bright planets are in the morning sky, so not shown on the chart. Jupiter rises in the southeast around 2:30 at the beginning of the month; around 1 a.m. at the end. It shines with a steady golden light. Brilliant silver Venus appears below Jupiter after 3 a.m. Saturn rises an hour after Venus at the beginning of the month looking like a medium-bright cream-coloured star. Venus's rising time gets slightly later through February. Jupiter and Saturn rise four minutes earlier each morning as we catch up on them. By the 18th Saturn will be just to the right of Venus, the pair rising after 3:30. Thereafter Saturn will be above Venus. The apparent grouping of the planets is just a line-of-sight effect. At mid-month Venus is 146 million km from us, Jupiter is 846 million km and Saturn 1615 million km away.

The crescent moon will be close to Venus on the 1st making it possible to see Venus by eye in daylight if you can first find the moon. The moon will be below Jupiter on the 28th.

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



## **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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[vice.president@cas.org.nz](mailto:vice.president@cas.org.nz)  
[treasurer@cas.org.nz](mailto:treasurer@cas.org.nz)  
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[webmaster@cas.org.nz](mailto:webmaster@cas.org.nz)  
  
[cstars@xtra.co.nz](mailto:cstars@xtra.co.nz)

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

### **CAS Contact Information**

Canterbury Astronomical Society Inc.

PO Box 25-137

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: \_\_\_\_\_