

The next WAS meeting will be held on Wednesday 1st April 2015 at 7:30 pm at Carter Observatory, Upland Rd, Kelburn, Wellington

'SO MANY TELESCOPES, SO LITTLE TIME! A TOUR AROUND OBSERVATORIES IN ARIZONA AND CALIFORNIA"

Dave McCarter, an amateur astronomer in London, Ontario, is an indefatigable observer and a respected telescope maker who served as president of the Royal Astronomical Society of Canada, London Centre, and beginning in 2000. He has "Asteroid (14463) McCarter" named after him. Dave and his friends journeyed around Arizona and California, visiting the different observatories and the large crater. This talk is about what they saw and learnt on their journey.

This meeting will be preceded by the Research Group Meeting and followed afterwards by light refreshments after the meeting.



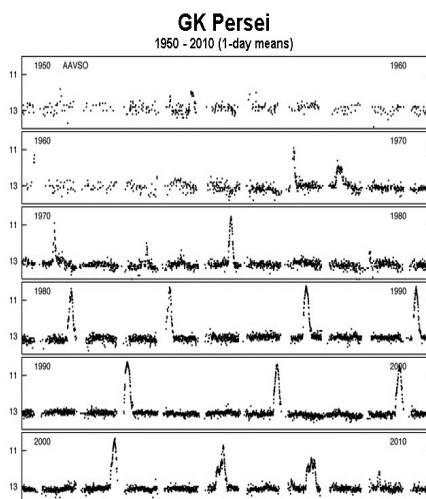
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CHANGE OF DATE FOR MAY 2015 MEETING

The May meeting will occur on Monday the 4th May and will be a special presentation by Dr. Stella Kafaka; Director of the American Association of Variable Star Observers.

Stella is dedicated to expanding the AAVSO, both in terms of increasing its numbers of members and observers and broadening its presence in the professional community. She well understands the importance of educating professional astronomers as to how the AAVSO can be relevant to them and their research. She is also committed to educating the next generation of both professional and amateur astronomers. She will not only represent the Association exceedingly well but will go further to forge new partnerships between the AAVSO and international amateur and professional organizations.



PRESIDENTS REPORT APRIL 2015 GORDON HUDSON

April will be a busy time for Astronomy with the start of Global Astronomy Month we have events happening at various times (See later page in the newsletter).

Ian Miller talked to WAS in May about his view of 'The Probability of Extrasolar Life'. The talk was well attended with about 50 people attending. Parts of his talk created a lot of feedback and were seen as a little controversial. At the end of the talk Ian was surrounded with members wanting to ask more questions.

Matt Vissers' talk on Cosmology has been postponed as he was not available for a Monday talk and a new date has not yet been arranged.

April's meeting will be by Dave McCarter and his subject will be 'So many Telescopes, so little Time! A Tour of Arizona and California'

The evening of April 1st brings in the International Global Astronomy Month and on Saturday 4th April we have a Lunar Eclipse which will be late starting at 11:15pm with Mid Eclipse occur-

ring at 12:56am NZDT. Note we change back to NZST at 3 am after the Eclipse. We will hold the WAS observing evening to coincide with the Global Star Party on April 25th.

We are in the process of creating membership cards and these should be ready in time for the April meeting and should be worn at all meetings, especially when we have a guest speaker, even if the talk is at another venue.

In May we should have the Beatrice Hill Tinsley Lecturer who this year will be Professor Gerry Gilmore however times and dates for this event have yet to be received from the RASNZ.

In October we will have Professor Chris Lintott visiting us and this should be quite a memorable occasion; details for this lecture are still being sorted so watch this space.

The WAS dome which has been stored at my place for the last 2 years is about to go to Tawa College. Work has begun on ground preparation for the piles and pier and we should be moving the Dome over Easter.

The Sid Cretney Bequest letter has

been sent to the Lawyers and we are awaiting their reply. If we are successful in our bid the Gifford Observatory will be our preferred place to house an automated Observatory. We are also in the planning stages with upgrade of the Thomas King Observatory.

The volunteering at Carter is going well but it is mainly through the efforts of a couple of our members. We need more volunteers. Have you helped yet? We assist on Tuesdays and Saturday evenings so put your hand up at the next meeting.

Finally the WAS observing evening once a month at Tawa College is struggling with lack of observers. Where are you all? Aprils observing evening at Tawa College is on 25th April starting at 6.30pm be there. This is also the Observing evening for Global Astronomy's Month called 'Global Star Party' observers from all around the world will be looking at the stars.

Gordon Hudson

President

Wellington Astronomical Society

WAS COUNCIL MEMBERS AND CONTACTS

Council Members

The following members were elected to Council at the Nov 2014 AGM

President: Gordon Hudson

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Vice President: John Talbot

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Secretary: Chris Monigatti

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Treasurer: Lesley Hughes

Councillors:

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John Homes + Webmaster

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RASNZ CONFERENCE 2015: LAKE TEKAPO

The next conference of the Royal Astronomical Society of New Zealand (RASNZ) will be held at Lake Tekapo from 8th-10th May 2015. Our guest speakers will be Professors Gerry Gilmore (University of Cambridge) and Edward Guinan (Villanova University), and the Fellows Lecture for 2015 will be delivered by Associate Professor Karen Pollard from Canterbury University. Titles and abstracts for these talks will be released when they are available. For further information on the RASNZ conference and registration please visit the conference website at www.rasnz.org.nz/Conference

The conference will be preceded by a two day symposium to celebrate the 50th anniversary of the Mount John

University Observatory - see <http://www.phys.canterbury.ac.nz/mtjohn50/> for registration information and other details of this meeting. Immediately after the conference the Ninth Trans-Tasman Symposium on Occultations (TTSO9) will also be held at the Godley Hotel, Lake Tekapo on 11th-12th May. For details see <http://occultations.org.nz/meetings/TTSO9/TTSO9.htm> page website or you can go to the RASNZ wiki www.rasnz.org.nz/wiki.

The RASNZ standing conference committee invites and encourages anyone interested in New Zealand Astronomy to submit papers, with titles and abstracts due 1st April 2015. The link to the paper submission form can be found on the RASNZ conference website given above, or you can go to the RASNZ wiki www.rasnz.org.nz/wiki. Please note that you MUST be registered for the conference to make a presentation.

AURORA CAPTURED FROM RED ROCKS! BRENDON DORAN

This photo was taken on the night of Tuesday 17th March at Red Rocks Reserve. I've been trying to photograph aurora from the Wellington south coast for about a year now and have had some success; but Tuesday night was something else. My aurora app was showing some interesting numbers indicating that there was a good chance of aurora activity and the Facebook group Aurora Australis was buzzing with excitement. Even though the weather wasn't looking very good in Wellington, with a lot of cloud around, I decided to take a chance and drove to the south coast from home in Porirua.

Arriving at the reserve carpark at around 9:30pm I could see stars on the horizon so I grabbed my camera gear and hiked into the reserve. The bay was heaving with messy surf and there was a lot of spray at beach level so I headed up to a higher level and set up the tripod and camera. A quick test shot and I could see the red glow of the aurora above the southern horizon and was taking lots of photos! Watching the sky I noticed lightness towards the horizon and, after a while, I was



able to make out faint pillars of light. Checking the camera I could see these were red shafts of light, I could see the aurora! As I continued taking photos and looked at the sky I could then see a redness appear and I knew I was actually watching the aurora strengthen and grow before me. I posted a message onto the Aurora Australis Facebook page and then continued to watch the sky.

Three others arrived after 10:30pm but the aurora was now beginning to die down and the cloud was thickening as well. By 11pm I had packed up and headed home knowing I had just seen something that I might never see again and was very happy with both the experience and the fact that I'd managed to capture the aurora on camera.

The images were captured with a Canon 6D and Samyang 14mm f2.8 lens with ISO initially set at 3200 and then later increased to 6400 with exposure lengths of 8 seconds. At the peak the aurora glow was filling the sky from east to west and 14mm wasn't wide enough to capture it all so I was taking multiple shots in portrait format for later stitching.

OCCULTATION NEWS

Occultation Observing from John Talbot

There was just one positive event for February.

And 13 events reported with clearly observed misses several with 2 observers.

Reports have been posted to:

<http://www.occultations.org.nz/planet/2015/plnres15.htm>

Steve Kerr, Director Occultation Section

I am pleased to announce that RASNZ council has formally announced that Steve Kerr is the new Director of RASNZ Occultation Section following the sad death of Graham Blow at New Year.

An intro been posted to <http://www.occultations.org.nz/aboutus.htm>

When sending Reports to me, please add a CC: to Director Occ Sec < Director@occultations.org.nz >

UPCOMING OBSERVING/EVENTS: GLOBAL ASTRONOMY MONTH APRIL 2015



Saturday / Sunday April 4/5 – Lunar Eclipse begins 10pm Sat 4 / maximum 1am Sun 5; we will be observing from 6pm until (maybe) 2am

April 13 – 18 – International Dark Skies Week turn off those unnecessary outdoor lights make Tawa safer and with darker night skies

Saturday April 25 – Global Star Party join observers all around the world who will be looking at the stars on this night! Observing commences at 6pm

All observing on the field just outside the Tawa College P.T.A. building. Text Chris Monigatti on his mobile 021 890 222 if you want to attend.



APRIL NIGHT SKY 2015

The bright planets Venus and Jupiter light up the twilight sky. Venus is in the northwest, brilliant and silver. Golden Jupiter is in the north. Venus sets before 8 pm NZST. As Venus sets Saturn rises on the opposite horizon. It isn't eye-catching like Venus and Jupiter but is the brightest 'star' low in the southeast sky.

On the night of April 4-5, Easter Saturday-Sunday, there is a **total lunar eclipse**. The moon enters the penumbra, the outer part of Earth's shadow, just after 10 pm NZDT. It will slowly darken on its right side. A more obvious darkening begins around 11:16 when it begins to move into the centre part of the Earth's shadow, the umbra. It is only just into the umbra at 1 a.m. when it begins to move out again. It is clear of the umbra at 2:45 a.m. NZDT which is 1:45 NZST if you have reset your clock. The moon is out of the penumbra at 3 a.m. NZST. This eclipse is the minimum that can be counted as a total eclipse. The moon is in the umbra for just five minutes: 12:58 to 13:03. So it should remain quite bright on its lower edge.

A small telescope will show the disk of **Jupiter** with its four bright 'Galilean' moons lined up on each side. Binoculars, held steady, will sometimes show one or two moons looking like faint stars close to the planet. Jupiter is 740 million km away mid-month. It sets in the northwest around midnight.

Venus, though bright, is small and featureless in a telescope like a tiny gibbous moon. It is catching up on Earth from the far side of the sun. As it does so it will increase its angle from the sun, causing it to set later in the night. At the end of the month Mercury might be glimpsed setting in the early twilight below and left of Venus. It sinks back into the twilight in May as it passes between us and the sun.

Saturn rises about 10 pm NZDT at the beginning of April; around 7 pm NZST by month's end. It is just below a curve of stars making the Scorpion's claws. Orange Antares is to the right of Saturn and fainter. A small telescope shows Saturn as an oval, the rings and planet blended. Larger telescopes separate the planet and rings and may show Saturn's moons looking like faint stars close to the planet. Titan, one of

the biggest moons in the solar system, orbits about four ring diameters from the planet. Saturn is 1370 million km away mid-month. The Moon will appear close to Saturn on the night of April 8-9.

Mercury, Mars and Uranus are all too close to the Sun to observe.

Sirius is the first true star to appear at dusk, midway down the northwest sky. It is soon followed by Canopus, southwest of the zenith. Below Sirius are Rigel and 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. Below and right of Sirius is Procyon.

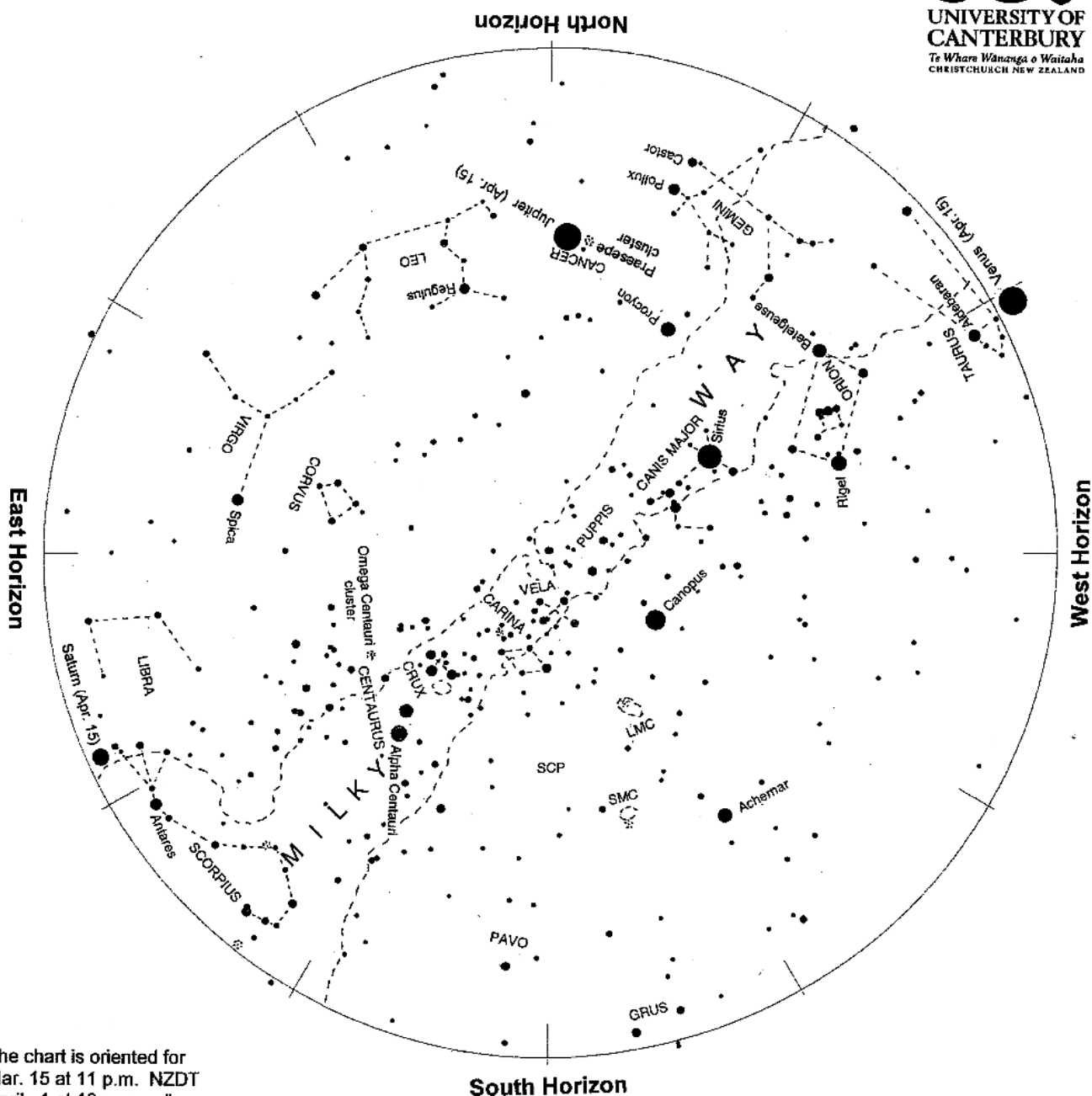
Just left of Jupiter is a fuzzy patch of light, the Praesepe cluster, marking the shell of Cancer the Crab. Praesepe is also called the Beehive cluster, the reason obvious when it is viewed in binoculars. Lower and further left are Pollux and Castor, the heads of Gemini the twins, making a vertical pair.

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

The Milky Way is brightest in the southeast above Crux. The Milky Way can be traced to nearly overhead where it fades. It becomes very faint in the northwest, right of Orion. The Milky Way is our edgewise view of the galaxy, the pancake of billions of stars of which the sun is just one.

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

Notes by Alan Gilmore, University of Canterbury's Mt John Observatory



The chart is oriented for
 Mar. 15 at 11 p.m. NZDT
 April 1 at 10 p.m. "
 April 15 at 8 p.m. NZST
 May 1 at 7 p.m. "

Evening sky in April 2015

To use the chart, hold it up to the sky. Turn the chart so the direction you are looking is at the bottom of the chart. If you are looking to the south then have 'South horizon' at the lower edge. As the earth turns the sky appears to rotate clockwise around the south celestial pole, SCP on the chart. Stars rise in the east and set in the west, just like the sun. The sky makes a small extra westward or clockwise shift each night as we orbit the sun.

Venus and Jupiter appear soon after sunset. Brilliant silver Venus in the northwest sets early. Golden Jupiter is due north at dusk. It sets in the northwest around midnight. Saturn rises in the southeast as Venus sets. Sirius, the brightest true star, is midway down the western sky. Below it is Orion with bright stars Rigel, blue tinted, and orange Betelgeuse. Canopus, the second brightest star, is southwest of overhead. Crux, the Southern Cross, and The Pointers, Alpha and Beta Centauri, are high in the southeast sky. The Scorpion, on its back, is rising in the southeast, above and right of Saturn. The Milky Way spans the sky from the Scorpion in the southeast to the northwest, right of Orion.