



Wellington Astronomical Society
2020-09 eNewsletter

Wellington Astronomical Society Inc.
Email Newsletter for September 2020

Contents

1. WAS SOCIETY MEETING – SEPTEMBER 2020
2. EVENTS
3. SOCIETY NEWS
4. ASTRONOMY NEWS
5. NIGHT SKY FOR SEPTEMBER 2020
6. CONTACTS

1. WAS SOCIETY MEETINGS – SEPTEMBER 2020

Due to COVID-19 Alert Level 2 continuing through to the 7 September at least, the Society Council has suspended all outreach and face to face events. Consequently, our Society meeting on **Wednesday 2nd September at 7.30pm** will be an online meeting only.

The meeting will be available via Zoom. To watch online: You will need to register at <https://www.was.org.nz/2020/08/sept-2020-monthly-meeting/>. An email acknowledging the registration will be sent back to you with a link to a Zoom meeting. Follow the instructions in the email to gain access to the meeting. If you don't

receive the email within a few minutes, please check your Spam folder. Contact webmaster@was.org.nz if you have any issues.

This month's meeting will contain the following:

1. Night sky in September
2. Astronomy News
3. Main talk at 8:00 pm



Argentina Total Solar Eclipse 2019 – Stephen Russell.

On the afternoon of July 2 2019, a total solar eclipse travelled across Chile and Argentina. For Stephen, getting accommodation within the path was difficult, particularly when his tour organiser changed the schedule without notice. He ended up basing himself in Mendoza, the Malbec capital of the world. This meant a bit of driving on eclipse day, but everything worked out well.

This talk will explain the good and bad parts of organising this trip, and his start on building the image processing software suite to merge the 100 images he captured with two cameras during this eclipse.

Stephen has been chasing eclipses since his first in 1976. Apart from eclipses, his main interests in astronomy are occultation observing and telescope making, both of which he has no spare time to indulge in.

2. EVENTS

Please note that the following events will only go ahead if we are back at Level 1.

WAS Astrophotography Group / Dark Sky Observing

Saturday 12 September, 7 pm onwards, Star Field - John Whitby's dark sky site. The backup night is the following Saturday 19.



Come along to this Astrophotography / Deep Sky event at a dark sky site in the Wairarapa. There will be a tour of the Night Sky for beginners with a pointer before we get on the telescopes. There is also a lot of expertise available for anyone wanting to photograph the Night Sky.

As this is a private property, you will need to register if you want to come along by contacting us through Facebook Messenger or by emailing president@was.org.nz. Include your email and mobile phone in the text if you are using Facebook Messenger. Directions to the site and any updates will be emailed out. Preference will be given to members of the Society first. This event is free to all WAS members. Non-members are required to pay \$10 per person. (To join the Society see <https://www.was.org.nz/join-us/>).

What to bring for astrophotography:

- A DSLR or mirrorless camera
- A wide-angle lens (preferably)
- A tripod to fix the camera to
- Warm clothes as it gets pretty cold at night
- Snacks and warm drinks if you want

With people taking photos, keep lights to a minimum (red lights if you can) especially car headlights (use parking lights). For those just interested in Deep Sky Observing, telescopes will be provided unless you want to bring your own.

Please contact Chris (021 890 222) or Antony (021 253 4979) for further details or cancellations. Updates will be available by the afternoon on the day of the event if the weather forecast is not looking good. This site is made available to the Wellington Astronomical Society through the generosity of John Whitby.

International Observe the Moon Night 2020

Saturday 26 September, 7 pm onwards, at the Wellington waterfront by the seaward entrance to the Lagoon



Join fellow Moon enthusiasts and curious people around the world in observing the Moon on September 26, 2020. Everyone is invited to learn about lunar science and exploration, take part in celestial observations and honour cultural and personal connections to the Moon. This is a virtual-friendly event, and we [interpret "observe" broadly](#), so you can join in whatever way suits you! This year we are offering [resources](#) and [activities](#) to support [small groups](#) and [individual observers](#), as well as larger [virtual events](#).

[International Observe the Moon Night](#) is a worldwide celebration of lunar science and exploration held annually since 2010. One day each year, everyone on Earth is invited to observe and learn about the Moon together, and to celebrate the cultural and personal connections we all have with our nearest neighbour.

The event occurs in September or October, when the Moon is around first quarter. A first quarter Moon is visible in the afternoon and evening, a convenient time for most hosts and participants. Furthermore, the best lunar observing is typically along the dusk/dawn terminator, where shadows are the longest, rather than at full Moon. <https://moon.nasa.gov/observe-the-moon/annual-event/overview/>

3. SOCIETY NEWS

2020 – 2021 Subscriptions

As the new WAS Financial Year is upon us (from 1st September), membership renewals are due for the year. Renewal of your subscription will enable you to maintain your membership till 31 August 2021. We want to thank all those that have already renewed their memberships.

To make astronomy fun and accessible for all, WAS would like to continue providing free events for everyone in and around Wellington, but we are only able to do this with your support. The Society has a number of fixed costs, including payment of insurance, affiliation to the Royal Astronomical Society of NZ, post-office box charges, venue fees and costs incurred when an international speaker is hosted.

There are also additional costs for telescopes to ensure members and the wider community have access to the universe through well-functioning equipment. We are also looking to fund a solar telescope as part of our outreach programme. Support from members through joining WAS and renewing their memberships allows us to promote astronomy through education and outreach for free. We appreciate your continued support of our Society's activities by renewing your membership.

Renewal forms can be found on the website, but a summary follows:

Adult/Waged: \$50.00

Student/Unwaged/Associate: \$30.00

Family: \$70.00

Payment methods:

- Direct Deposit or Internet Banking - use Account No: 03-0502-0508656-00, please include reference so we know who is making the payment
-

- Cheque - make out to Wellington Astronomical Society Inc, and mail to PO Box 3181, Wellington 6140
- Cash - please bring exact amount to meeting.

Please send an email to membership@was.org.nz informing us of your membership renewal and payment.

Society Newsletter Editor

We are looking for someone one to take over the role of the Newsletter Editor. The person has the responsibility for producing the Society newsletter once a month (except for January). As can be seen, the format is straightforward with a template set up in MS Word. Essentially it is taking a copy of the previous month's newsletter and updating it with the latest events and astronomy news. It takes 4 – 6 hours a month to complete with most of the information supplied by others. The Newsletter Editor is a position on the Society's Council.

AGM / Council Members

As we approach our next AGM on 4 November, we are looking for more members to join the Council. If you are interested in being more involved with the Society's activities and help steer the future direction of the Society, please put your hand up. The Society needs new volunteers with fresh new ideas so we can continue to promote, educate and inspire others in Astronomy.

If there are **motions, proposals or any items you want addressed at the AGM** please email Antony president@was.org.nz or Matt secretary@was.org.nz by 30 September so we can put a notice in the October newsletter. Let us know too if you are interested in the Newsletter Editor position or have any questions about being a Council member.

WAS RAG

The WAS research group (WAS-RAG) will be meeting online on 9 September and details will be communicated on the group's mailing list. Everyone in the group will be contacted beforehand for a decision on the timing.

The group will keep contact via the WAS-RAG mailing list. Roland can be reached on roland@cno.org.nz in the meantime.

WAS meeting presentations on Video

If you were unable to attend any of the Society meetings but are

interested in watching our brilliant speakers deliver their presentations, you can find them online at <https://www.was.org.nz/2019-meeting-presentations/>. To access the videos, you will need the password: *WASvideo*.

WAS newsletters

Similarly, if you are interested in accessing WAS newsletters, going all the way back to 2007, you can find them on the following link: <https://www.was.org.nz/was-monthly-newsletters/>. The newsletters are accessible for anyone that is interested in reading them.

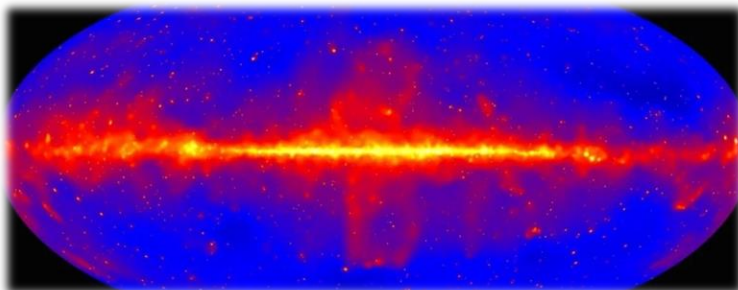
ASTRONZ Binoculars for Sale



WAS, in conjunction with ASTRONZ, has these 10x50 high-quality light-weight binoculars available at a reduced price to members. Binoculars are available for **\$80** each (usually sell for \$99 excluding freight). Please email Antony Gomez, president@was.org.nz, if you would like to buy a pair

4. ASTRONOMY NEWS

There's a Strange Glow in The Centre of Our Galaxy, And It's Not What We Thought It Was.



The centre of the Milky Way is glowing. Yes, there's a big chonkin' black hole there, and it's a very energetic region, but there's an additional high-energy, gamma-ray glow, above and beyond the

activity we know about, and it's something that's yet to be explained. <https://www.sciencealert.com/a-strange-glow-in-the-galactic-centre-is-not-the-annihilation-of-dark-matter>

Where Did Earth's Water Come From? Study Casts Doubt on The Current Meteorite Theory



Water covers 70 percent of the Earth's surface and is crucial to life as we know it, but how it got here has been a longstanding scientific debate.

The puzzle was a step closer to being solved Thursday after a French team reported in the journal [Science](#) they had identified which space rocks were responsible, and suggested our planet has been wet ever since it formed. <https://www.sciencealert.com/study-proposes-new-origin-theory-for-earth-s-water>

Physicists Just Found a New Quantum Paradox That Casts Doubt on a Pillar of Reality

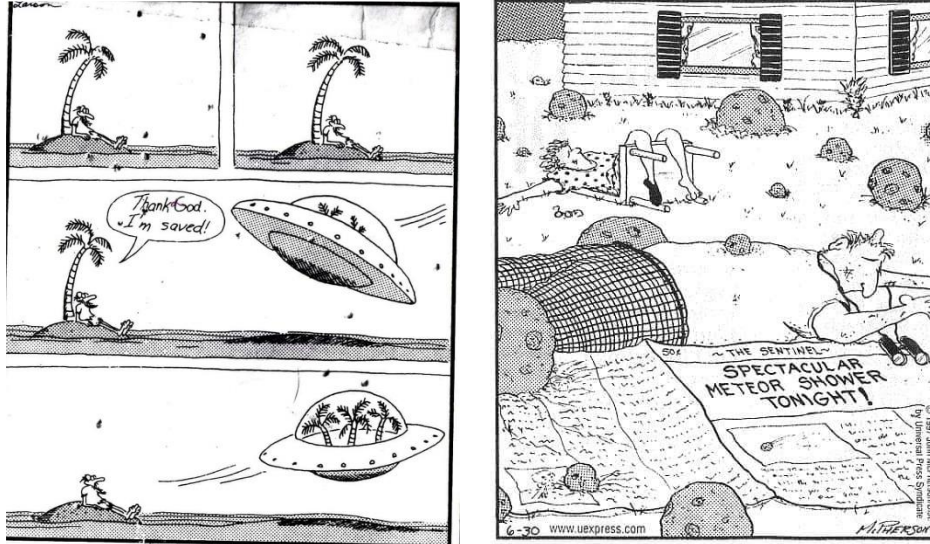


If a tree falls in a forest and no one is there to hear it, does it make a sound? Perhaps not, some say. And if someone is there to hear it? If you think that means it obviously did make a sound, you might need to revise that opinion.

[We have found a new paradox](#) in quantum mechanics – one of our two most fundamental scientific theories, together with Einstein's theory of relativity – that throws doubt on some common-sense ideas about physical reality. <https://www.sciencealert.com/a-new-quantum->

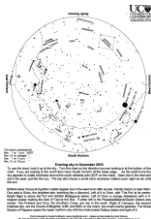
[paradox-throws-the-foundations-of-observed-reality-into-question](#)

Astronomy Humour



5. NIGHT SKY FOR SEPTEMBER 2020

The [Night Sky for September 2020](#) courtesy of the University of Canterbury.

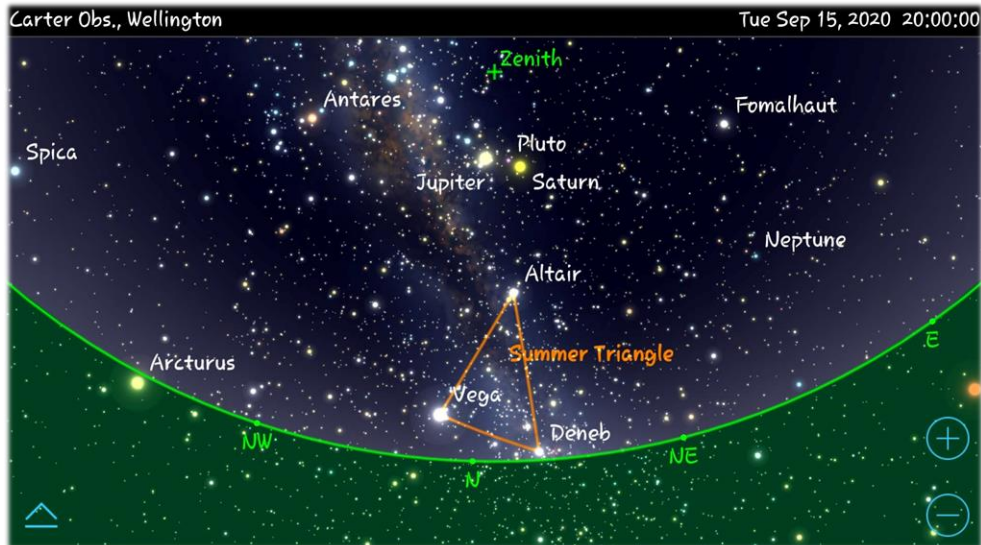


NASA Night Sky Notes September 2020



This article is distributed by NASA Night Sky Network. The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Summer Triangle Corner: Altair - David Prosper (*Adapted for the WAS newsletter*)

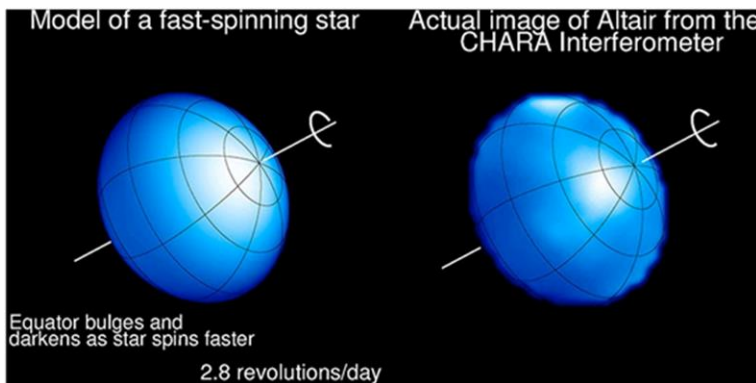


Altair is one of three stars which form the Northern Hemisphere's Summer Triangle. The other stars are Deneb and Vega. Here in the Southern Hemisphere we refer to as the Northern Triangle, which is visible low in the North at this time of year. Brilliant Altair might be the most unusual of the three stars of the Triangle, due to its great speed: this star spins so rapidly that it appears "squished."

A very bright star, Altair has its own notable place in the mythologies of cultures around the world. Altair represents the cowherd Niulang in the ancient Chinese tale of the "Cowherd and the Weaver Girl." Altair is the brightest star in the constellation of Aquila the Eagle; while described as part of an eagle by ancient peoples around the Mediterranean, it was also seen as part of an eagle by the Koori people in Australia! They saw the star itself as representing a wedge-tailed eagle, and two nearby stars as his wives, a pair of black swans. More recently one of the first home computers was named after the star: the Altair 8800.

Altair's rapid spinning was first detected in the 1960s. The close observations that followed tested the limits of technology available to astronomers, eventually resulting in direct images of the star's shape and surface by using a technique called *interferometry*, which combines the light from two or more instruments to produce a single image. Predictions about how the surface of a rapidly spinning massive star would appear held true to the observations; models predicted a squashed, almost "pumpkin-like" shape instead of a round sphere, along with a dimming effect along the widened equator, and the observations confirmed this! This equatorial dimming is due to a phenomenon called *gravity darkening*. Altair is wider at the equator than it is at the poles due to centrifugal force,

resulting in the star's mass bulging outwards at the equator. This results in the denser poles of the star being hotter and brighter, and the less dense equator being cooler and therefore dimmer. This doesn't mean that the equator of Altair or other rapidly spinning stars are actually dark, but rather that the equator is dark in comparison to the poles; this is similar in a sense to sunspots. If you were to observe a sunspot on its own, it would appear blindingly bright, but it is cooler than the surrounding plasma in the Sun and so appears dark in contrast.



6. CONTACTS

The following members were elected to Council at the November 2019 AGM:

President: Antony Gomez (president@was.org.nz) - 021 253 4979

Vice President: Andrew Fuller (vice-president@was.org.nz)

Secretary: Matt Boucher (secretary@was.org.nz)

Treasurer: Duncan Hall (treasurer@was.org.nz)

Membership Secretary: Shazia Gazi (membership@was.org.nz)

Newsletter Editor: Shazia Gazi (editor@was.org.nz)

Website: Peter Woods (webmaster@was.org.nz)

Telescope custodian: Chris Monigatti

Research Group coordinator: Roland Idaczyk

Council: Murray Forbes, John Homes, Isabella Eftimov, Grace Esterman

Postal Address:

Wellington Astronomical Society,

PO Box 3181,

Wellington 6140, New Zealand

Website: www.was.org.nz

Instagram: [@was.nz](https://www.instagram.com/was.nz)

Facebook page: [Wellington Astronomical Society](https://www.facebook.com/WellingtonAstronomicalSociety).

Facebook group: [WAS – Wellington Astronomical Society](https://www.facebook.com/WAS-WellingtonAstronomicalSociety) (for members)

Facebook Astrophotography group: [WAS Astrophotography Group](https://www.facebook.com/WAS-AstrophotoGroup) (for members).
