



**Wellington Astronomical Society
2020-04 eNewsletter**

**Wellington Astronomical Society Inc.
email Newsletter for April 2020**

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Kia ora WAS members,

The Wellington Astronomical Society would like to start by wishing you and your loved ones well during this period of uncertainty. COVID-19 means that, temporarily, we must change how we operate but as Albert Einstein said, 'only a life lived for others, is worth living', and this is what we're doing here in Aotearoa;

by staying at home and considering the health and wellbeing of our fellow kiwis.

This is a difficult time, which is why we would be happy to support you, where possible, if you encounter any issues during the isolation period, or if you just want tips on stargazing from your back yard.

Take care and kia kaha.

1. WAS SOCIETY MEETINGS – APRIL & MAY 2020

In light of the COVID-19 global pandemic, the April and May WAS society meetings have been cancelled.

We will review the government's advice before resuming the society meetings. Please keep an eye on our newsletters and follow us on Facebook to keep up to date with information regarding events and meetings.

2. EVENTS

All WAS events have been suspended or postponed due to Aotearoa being at Alert Level 4 to respond to the COVID-19 crisis. A breakdown of the suspensions / postponement are as follows:

- Public outreach events, such as the events we run on the Wellington waterfront and school events are suspended. We will review our position prior to the Matariki season as this is the time of year when we run many events. There would be risk to outreach volunteers and we don't want to be responsible for passing on the virus through one of our events.
 - Star Field and Tawa College events have also been suspended.
 - The Beatrice Hill Tinsley public lecture tour has been postponed as the overseas speakers will not be available. It is possible we may be able to run this later in the year depending on overseas travel restrictions and the availability of speakers.
 - The RASNZ Centennial Conference, the Dark Skies workshop and the AGM has been postponed. This may be held in the final quarter of 2020. For those who have already paid registration fees, you can choose to take no action and the registration will remain on record for the rescheduled conference, or you can request a full refund by emailing the conference organisers and providing your bank account details. You can find more information on the RASNZ website.
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Please keep an eye on the WAS website www.was.org.nz and our Facebook page [Wellington Astronomical Society](#) for updates. Any questions, suggestions, or for further information please email president@was.org.nz.

3. SOCIETY NEWS

WAS RAG

Due to COVID-19 restrictions, the WAS research group (WAS-RAG) is suspending their monthly meetings until further notice. The group will keep contact via the WAS-RAG mailing list. Roland can be reached on roland@cno.org.nz in the meantime. WAS-RAG may arrange a virtual meeting, if and when so desired or considered useful.

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.

The WAS newsletters will continue to be sent to members every month during the COVID-19 situation.

WAS Survey

We will be creating a survey to get your feedback on WAS. We will be in touch, via newsletter and/or social media to better understand users of WAS services and learn about what we can do to make the Society an even greater place to come and enjoy astronomy, as well as how you can help us do this!

4. ASTRONOMY NEWS

Despite this being a difficult time nationally and globally, the time spent at home could be utilised to do space and astronomy activities.

Check out the following link for details on how you can re-live Apollo 13 in real time, do some citizen science and have fun with kids and family with astronomy ideas and projects:

<https://www.sciencealert.com/try-these-astronomy-activities-to-keep-you-busy-during-the-coronavirus-outbreak>

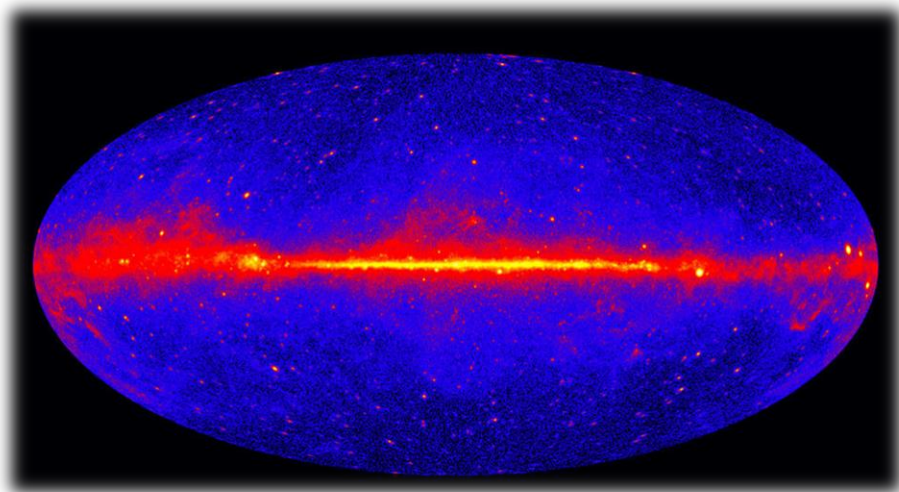
This link identifies free space projects for kids (and adults):

<https://www.space.com/free-nasa-space-projects-at-home-coronavirus.html>

Stardome has lots of resources on their website for astronomy enthusiasts: <https://www.stardome.org.nz/astronomy/resources/>, as does the Te Awamutu Space Centre:

<https://www.spacecentre.nz/resources/>

The edge of the Milky Way



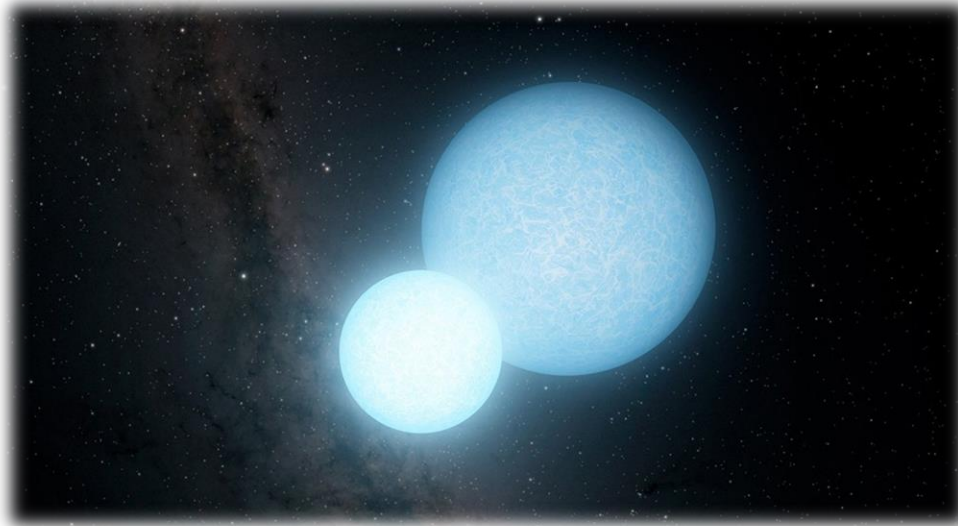
Our Milky Way has been found to be nearly 2 million light-years across and more than 15 times wider than its spiral disk!

An astrophysicist at Durham University in England, and her colleagues, have used nearby galaxies to locate the Milky Way's edge. Previously, it was hard to measure the diameter of the Milky Way as the dark halo emits no light; but due to the team's technique, they have discovered that our galaxy is precisely 1.9 million light-years in diameter, give or take 0.4 million light-years.

To read more about this, follow this link:

<https://www.sciencenews.org/article/astronomers-have-found-edge-milky-way-size>

A potential future for our star



We could now find out what will happen to our Sun in the future as a rare pulsating white dwarf has been spotted in a binary star system.

HiPERCAM, a high-speed imaging camera mounted on top of the Gran Telescopio Canarias, provided data that allowed an undergraduate student to spot that one of the white dwarfs in the system is pulsating rapidly.

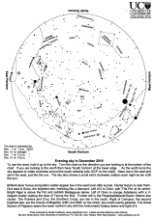
The binary system the pulsating white dwarf was seen in comprises two stars that are eclipsing each other. This is the first pulsating star of its kind found in this type of star system.

To read more about this story, visit:

<https://astronomy.com/news/2020/03/rare-pulsating-white-dwarf-spotted-in-a-binary-star-system>

5. NIGHT SKY FOR APRIL 2020

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



NASA Night Sky Notes April 2020



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!

Hubble at 30: Three Decades of Cosmic Discovery

David Prosper

The **Hubble Space Telescope** celebrates its 30th birthday in orbit around Earth this month! It's hard to believe how much this telescope has changed the face of astronomy in just three decades. It had a rough start -- an 8-foot mirror just slightly out of focus in the most famous case of spherical aberration of all time. But subsequent repairs and upgrades by space shuttle astronauts made Hubble a symbol of the ingenuity of human spaceflight and one of the most important scientific instruments ever created. Beginning as a twinkle in the eye of the late Nancy Grace Roman, the Hubble Space Telescope's work over the past thirty years changed the way we view the universe, and more is yet to come!

We've all seen the amazing images created by Hubble and its team of scientists, but have you seen Hubble yourself? You actually can! Hubble's orbit -- around 530 kilometres overhead -- is close enough to Earth that you can see it at night. The best times are within an hour after sunset or before sunrise, when its solar panels are angled best to reflect the light of the Sun back down to Earth. You can't see the structure of the telescope, but you can identify it as a bright star-like point, moving silently across the night sky. It's not as bright as the Space Station, which is much larger and whose orbit is closer to Earth (about 350 kilometres), but it's still very noticeable as a single steady dot of light, speeding across the sky. Hubble's orbit brings it directly overhead for observers located near tropical latitudes; observers further north and south can see it closer to the horizon. You can find sighting opportunities using satellite tracking apps for

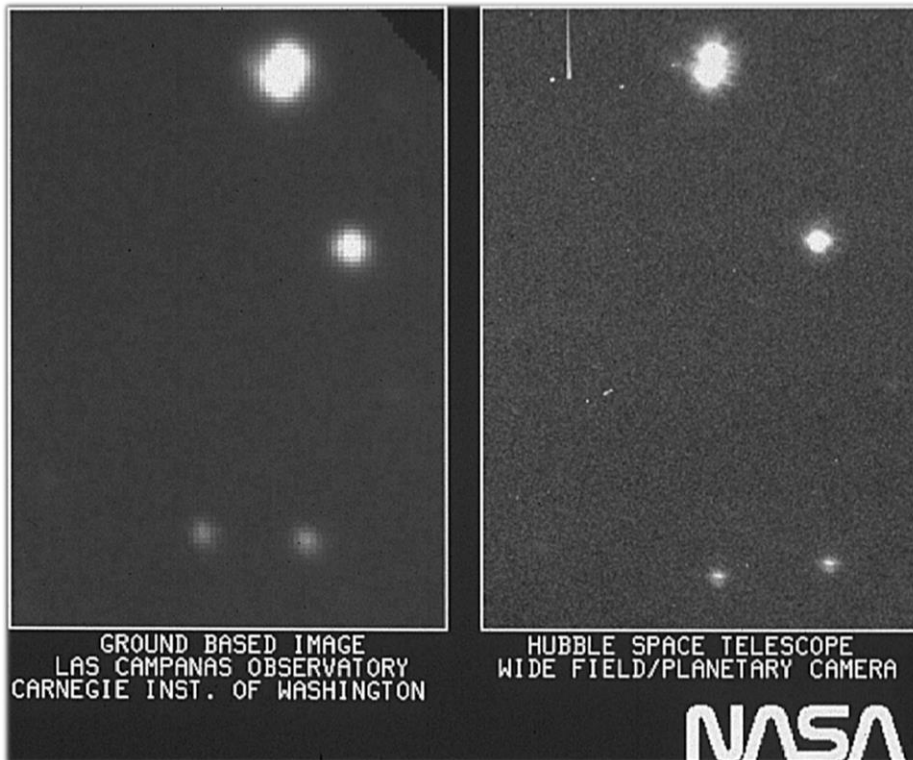
your smartphone or tablet, and dedicated satellite tracking websites. These resources can also help you identify other satellites that you may see passing overhead during your stargazing sessions.

NASA has a dedicated site for Hubble's 30th's anniversary at bit.ly/NASAHubble30. The Night Sky Network's "Why Do We Put Telescopes in Space?" activity can help you and your audiences discover why we launch telescopes into orbit, high above the interference of Earth's atmosphere, at bit.ly/TelescopesInSpace. Amateur astronomers may especially enjoy Hubble's images of the beautiful objects found in both the Caldwell and Messier catalogs, at bit.ly/HubbleCaldwell and bit.ly/HubbleMessier. As we celebrate Hubble's legacy, we look forward to the future, as there is another telescope ramping up that promises to further revolutionize our understanding of the early universe: the James Webb Space Telescope!

Discover more about the history and future of Hubble and space telescopes at nasa.gov.



Image Credit: NASA



Hubble's "first light" image. Even with the not-yet-corrected imperfections in its mirror, its images were generally sharper compared to photos taken by ground-based telescopes at the time. Image Credit: NASA

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, Margaret Keane

Postal Address:

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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-Astrophoto) (for members).
