



**Wellington Astronomical Society**  
**2019-06 eNewsletter**

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**Wellington Astronomical Society Inc.**  
**email Newsletter for June 2019**

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**1. June 2019 SOCIETY MEETING**

The next WAS meeting will be held on Wednesday 5<sup>th</sup> of June at 7.30 pm at Space Place, Carter Observatory, 40 Salamanca Rd, Kelburn.

This month's meeting will contain the following:

1. Night sky in June
  2. Astronomy News
  3. Main talk at 8:00 pm
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### **The Day the Universe Changed - Antony Gomez**

A hundred years ago, observations made during a Solar Eclipse on the 29<sup>th</sup> May 1919 changed the way we looked at the Universe. It provided the first observational proof of a new theory of gravity and made Einstein a household name. This theory, called General Relativity (GR), solved the anomalous precession in the orbit of Mercury, predicted the bending, stretching of light and the slowing down of time around massive objects. It led to the prediction of black holes and we saw the first ever image of a supermassive black hole in April this year. GR predicted the compressing and expanding of space and time in traveling waves which again were detected for the first time in 2015 from a merger of two black holes, which normally we would not be able to see, opening a new era in Astronomy.

Antony is the President of the Wellington Astronomical Society. As a child he looked up at the stars but it wasn't till 2000 that he had his first look through a telescope. Now he is passionate about promoting Astronomy through public outreach and education, showing others the wonders of the night sky. He has a keen interest in the physical sciences, especially in quantum physics and cosmology, which looks at the birth of the Universe and its ultimate fate. As a past scientist working in climate change, he has spent a short time in Antarctica, visited the Keck and other big telescopes on the top of Mauna Kea, Hawaii.

This presentation is part of our celebration of International Astronomical Union Centenary Celebrations

<https://www.iau-100.org/sobral-eclipse-centennary>

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## **2. EVENTS**

**WAS Astrophotography group / Dark Sky Observing** - Saturday 1<sup>st</sup> June  
8.30 pm, Star Field - John Whitby's dark sky site.

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**This event has been cancelled due to the weather. The next event is scheduled for Saturday 6<sup>th</sup> July.**

Come along to this Astrophotography / Deep Sky event at a dark sky site in the Wairarapa. With no Moon, you will see some amazing dark skies with the Milky Way standing out.

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](mailto: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. (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.

For further details or cancellations contact Chris 021 890 222 or Antony 021 253 4979. This event will be updated by the afternoon on the day of the event if the weather forecast is not looking good.

**Astronomy Night – The Day the Universe Changed**, Lower Hutt War Memorial Library, Friday June 7, 6 pm.

If you miss the WAS meeting this month (or just want to hear Antony's talk again!), come along to the Hutt Library's Astronomy Night. Wellington Astronomical Society President, Antony Gomez, will be talking about The Day the Universe Changed when, 100 years ago, observations of a Solar Eclipse on 29 May 2019 gave proof to Einstein's theory of general relativity. There may also be opportunity for some telescope observing after the talk if the weather is clear.

**June Star Party** - Saturday 8 June, 6 – 10 pm, Wellington Water Front

Join us at the Wellington Waterfront and have a look through our big telescopes. The Moon, Jupiter and Saturn will be out and are spectacular to view in a telescope, as well as many other objects in the night sky. It will be a memorable experience.

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Check this event and our Facebook page on the afternoon of the event for any updates on the night sky conditions.

**WAS Winter Solstice Dinner** – Saturday 22 June, 6:30 – 9:30 pm,  
Johnsonville Community Centre, 3 Frankmoore Ave, Johnsonville.



Time to celebrate Matariki and the Winter Solstice and which takes place at 03:54 am 22 June 2019 with a warm midwinter dinner. We are celebrating the change from longer nights to longer days as we start to move back into Spring, a time for new life. B.Y.O Drinks and Food (main or dessert) to share. WAS will provide extra food for the evening.

**Matariki Dawn Viewing** – Saturday 29 June, 5 am – 7 am, Mt Victoria, Wellington

Enjoy a special opportunity to view the rise of Matariki from Tangi te Keo / Mount Victoria summit. The Māori New year was traditionally signalled with the sighting of Matariki in the early morning eastern horizon. Space Place and WAS will have telescopes up on the viewing platform for this special early morning viewing of Matariki.

**Dark Sky Night at Wainuiomata Recreation Reserve** – Saturday 29 June, 7.00 pm – 10 pm, Wainuiomata Recreation Reserve.

Come along to experience a dark night sky at the Wainuiomata Recreation Reserve. Members of WAS will be there with the 10” Dobsonian telescopes. See below for the location of this event.



*Location of Wainuiomata Recreation Reserve. For a larger version please [click here](#).*

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### Helpers Wanted for Outreach Events

With Matariki season nearly upon us, WAS has been asked by a number of schools and organisations to have telescopes at their events. There are cases where there is more than one booking on the day. We need a few more people involved with the Outreach team to help spread the load. All that is required is for you to stand with a telescope operator and manage the public or become a telescope operator yourself. Honestly, it takes less than 5 minutes to learn how to operate one of our Dobsonian telescopes. And we are generally pointing at bright objects like the Moon, Jupiter or Saturn so you don't need to be an expert on the night sky. Those of us that are involve love seeing how excited and awed children and adults get when they look through a telescope for the first time. This is how we promote, educate and inspire others to Astronomy! If you are interested in helping please contact Antony at [president@was.org.nz](mailto:president@was.org.nz).

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## 3. SOCIETY NEWS

### 2019 RASNZ Conference, New Plymouth



RASNZ Conference, 17-19 May 2019, New Plymouth

It was another great RASNZ Conference, this time in New Plymouth, being the centenary of the New Plymouth Astronomical Society. It was a great venue close to the beach with nice walks. There were at least 13 WAS members attending. What was noticeable were the number of young people at the Conference this year. There were the SWAPA (Students With A Passion for Astronomy) secondary students that RASNZ sponsors each year who each presented why they each had a passion in astronomy and their individual plans for University the following year. There were three students from NZSSA (NZ Students Space Association) – Christchurch Branch who ASTRONZ sponsored. Many of the students gave excellent presentations on the work they were doing.

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Some of the other presentations included education in astronomy, historical accounts, much of the current work taking place at Mt John Observatory, 3D spectroscopy and the first image of a black hole. There is so much exciting research taking place in astronomy it is hard to keep up.

There was a visit to the New Plymouth Astronomical Society's Observatory on the Friday night. It is so close to the city centre yet had some spectacular views through the two telescopes there. The Conference dinner was great event with a nice meal. Awards were presented at the dinner. John Drummond from Gisborne was made a fellow of the RASNZ whereas WAS President Antony Gomez was awarded the 2019 RASNZ Murray Geddes Medal for services to astronomy in New Zealand and former WAS President Gordon Hudson was awarded the RASNZ President's Service Award for services to RASNZ.



*RASNZ President Nick Rattenbury with John Drummond and Antony Gomez. Unfortunately Gordon Hudson was unable to receive his award in person.*

On the last day Duncan Hall and Antony Gomez made a short presentation on hosting the 2020 RASNZ Centenary Conference which is being held on the 8 – 10 May 2020 at Te Wharewaka o Poneke on the Wellington Waterfront. Given it is a Centenary celebration, we are aiming to have the biggest and best RASNZ Conference here in Wellington next year. No excuses for you Wellingtonians not to be there so mark it in your calendars now. A big thanks to the New Plymouth Astronomical Society for hosting the 2019 Conference. We had a great time!

Here is a link to their [Photo Album](#).

### **Wellington Astronomical Society Research Astronomy Group (WAS RAG)**

New members of WAS (or perhaps even not-so-new members) may not be aware that we also run another group meeting once per month for members interested in doing research observations and analysis. This group is called

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WAS RAG (Wellington Astronomical Society Research Astronomy Group). Our current interests include occultations and variable stars.

If you're interested in joining the group, please contact Roland Idaczyk ([roland@cno.org.nz](mailto:roland@cno.org.nz)) to be added to our mailing list and come along to our next meeting. All our meetings are held the week after the Society's general meeting, i.e. on the second Wednesday of the month. This means the next meeting will be on Wednesday 12<sup>th</sup> June.

The meeting runs from 5:30pm to 7:30pm and is held at my workplace. This is WSP-Opus Research, at 33 The Esplanade in Petone. The map shows how you can get to it travelling either from Wellington (come along the Esplanade) or from Lower Hutt (come along Hutt Road). There are five visitors' car parks (not surprisingly, labelled 'Opus visitors'), which will probably be free at that time of the day. Alternatively, you can park nearby on either the Esplanade or on Hutt Road.

The outside sliding doors are locked after 5pm so I'll be sitting in the entrance between 5:00pm to 5:30pm to let everyone in. If you arrive outside these times, ring me on (4) 5870612 and I'll rush out (well, walk at a fastish pace) to let you in.

When you arrive, for health & safety reasons, you need to sign-in. This is done using the large touch-screen at reception. The sign-in process includes a safety induction. I'll also run through that again before we begin the meeting. See you then - Murray Forbes.



(For a bigger version of the map please follow [this link](#)).



It is coming up to the best time of the year for stargazing and astrophotography, with Jupiter, Saturn and the Milky Way rising high in the sky. So if you are interested in purchasing a telescope, binoculars or other astronomical items from ASTRONZ [www.astronz.nz](http://www.astronz.nz), please indicate in the Order Notes that you were referred by the Wellington Astronomical Society



(WAS). WAS will then receive a commission on your purchase. ASTRONZ has charitable status and returns its profits back to astronomy in NZ 📡

If you spend more than \$500, you will in return receive from WAS a free ordinary membership to the Society for the following year. And if you bring your telescope or binoculars to one of our Observing evenings, we can show you how to get the best out of it and help you locate some of the spectacular objects in the night sky. If you have any questions, you can send us a message 📧



Instagram

Wellington Astronomical Society is also now on Instagram, search **was.nz** in the Instagram Hashtags directory to find us. It would be great if members had photos or things they would like to share on this platform. Please email [info@was.org.nz](mailto:info@was.org.nz) with photos.

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#### 4. ASTRONOMY NEWS

##### Matariki



We are coming up to the celebration of Matariki beginning on the 25<sup>th</sup> June and usually runs for two weeks. Here is a great article on [Everything you wanted to know about Matariki but were too embarrassed to ask](#).

[Global Astronomical Community Celebrates the 100<sup>th</sup> Anniversary of the 1919 Solar Eclipse](#)

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Last Wednesday 29<sup>th</sup> May 2019, marked the 100th anniversary of the paradigm-shifting solar eclipse observations that successfully tested Einstein's general theory of relativity for the first time. The International Astronomical Union, within the framework of its own centenary celebrations, is supporting various initiatives on the theme of the 1919 Solar Eclipse, including conferences, celebratory events, educational activities, and more. This also includes a celebration in São Tomé and Príncipe with the participation of the President of São Tomé and Príncipe and the President of Portugal.

In 1915, Albert Einstein published his [general theory of relativity](#), which to this day remains the best description of gravitation that physicists have. Shortly thereafter, the British astronomer [Sir Arthur Eddington](#) set out to [verify it experimentally](#), by testing its prediction that light would be deflected by the Sun. Since the experiment involved viewing stars that are close to the Sun, it could only be conducted during a total solar eclipse.

The [solar eclipse of 29 May 1919](#) presented the perfect opportunity to take the measurements, so expeditions were organised to two locations where the eclipse would be total: [Sobral](#) (Brazil) and [São Tomé and Príncipe](#) off the coast of Africa. [Sir Frank Watson Dyson](#) coordinated the expeditions from England, dispatching Eddington to Príncipe and French astronomer [Andrew Crommelin](#) to Sobral. The results were compatible with Einstein's theory and diverged significantly from Newtonian gravity. Since then, many further experiments have been carried out to test general relativity, which is widely used in modern physics and astrophysics.

In 2019, the International Astronomical Union, as part of its [centenary celebrations](#), is commemorating the 100th anniversary of the 1919 solar eclipse by supporting several initiatives worldwide: - [\(more\)](#)

Other up to date Astronomy News and Society events is available on the Society's Facebook page: [Wellington Astronomical Society](#).

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## 5. NIGHT SKY FOR JUNE 2019

The [Night Sky for June 2019](#) courtesy of the University of Canterbury.

### NASA Night Sky Notes June 2019



#### **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.org](https://nightsky.jpl.nasa.org) to find local clubs, events, and more!

#### Jupiter Shines in June - David Prosper

Jupiter stakes its claim as the king of the planets in June, shining bright all night. Saturn trails behind Jupiter, and the Moon passes by both planets mid-month. Mercury puts on its best evening appearance in 2019 late in the month, outshining nearby Mars at sunset.

Jupiter is visible almost the entire evening this month. Earth will be between Jupiter and the Sun on June 10, meaning Jupiter is at opposition. On that date, Jupiter rises in the east as the Sun sets in the west, remaining visible the entire night. Jupiter will be one of the brightest objects in the night sky, shining at magnitude -2.6. Its four largest moons and cloud bands are easily spotted with even a small telescope.

What if your sky is cloudy or you don't have a telescope? See far more of Jupiter than we can observe from Earth with NASA's Juno mission! Juno has been orbiting Jupiter since 2016, swooping mere thousands of miles above its cloud tops in its extremely elliptical polar orbits, which take the probe over 5 million miles away at its furthest point! These extreme orbits minimize Juno's exposure to Jupiter's powerful radiation as it studies the gas giant's internal structure, especially its intense magnetic fields. Juno's hardy JunoCam instrument takes incredible photos of Jupiter's raging storms during its flybys. All of the images are available to the public, and citizen scientists are doing amazing things with them. You can too! Find out more at [bit.ly/JunoCam](https://bit.ly/JunoCam)

Saturn rises about two hours after Jupiter and is visible before midnight. The ringed planet rises earlier each evening as its own opposition approaches in July. The Moon appears near both gas giants mid-month. The Moon's tour begins on June 16 as it approaches Jupiter, and its visit ends on June 19 after swinging past Saturn.

Mercury is visible for a short time in the early evening, along with Mars. Spot Mercury low in the western horizon just after sunset, close to the much dimmer and redder Mars. The two smallest planets of our solar system pass

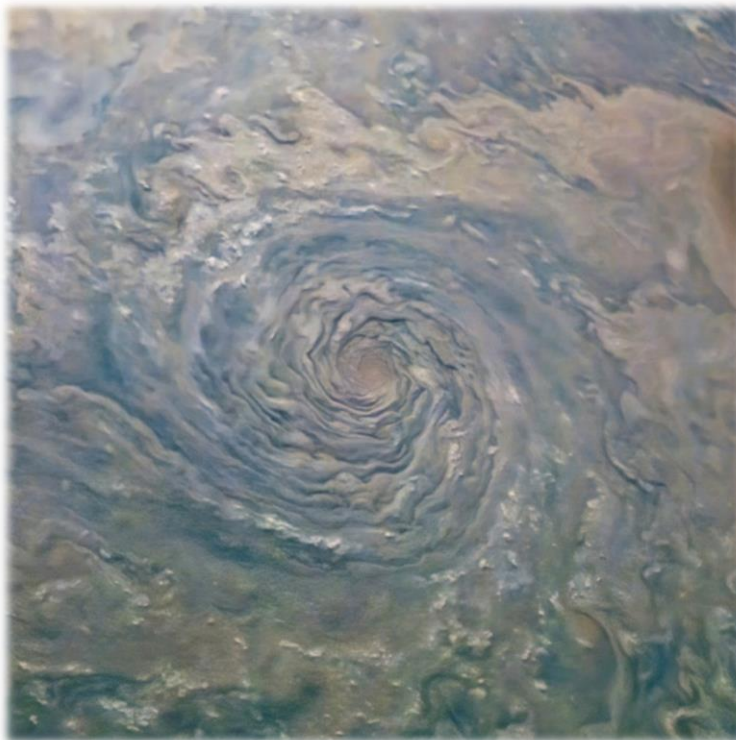
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close to each other the evenings of June 17-18, coming within just  $\frac{1}{4}$  degree, or half the width of a full Moon, making for a potentially great landscape photo at twilight.



*Mercury and Mars, low on the NW horizon, 19 June 2019, 5.47 pm, Wellington.*

Discover more about NASA's current and future missions at [nasa.gov](https://nasa.gov)



*Caption: A giant storm in Jupiter's north polar region, captured by JunoCam on February 4, 2019. Image processing performed by citizen scientists Gerald Eichstädt and Seán Doran.*

Source: [bit.ly/JupiterSpiral](https://bit.ly/JupiterSpiral)

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## 6. CONTACTS

The following members were elected to Council at the Nov 2018 AGM

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

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

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

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

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

Newsletter Editor: Antony Gomez ([editor@was.org.nz](mailto:editor@was.org.nz))

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

Telescope custodian: Chris Monigatti

Research Group coordinator: Roland Idaczyk

Council: Shazia Gazi, Peter Woods, Chris Monigatti, Roland Idaczyk, Murray Forbes, John Homes, Becky Bateman, Gaby Perez, Lee Mauger

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Wellington 6140, New Zealand

Website: [www.was.org.nz](http://www.was.org.nz)

Facebook page: [Wellington Astronomical Society](#).

Facebook group: [WAS – Wellington Astronomical Society](#) (for members)

Facebook Astrophotography group: [WAS Astrophotography Group](#) (for members)

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