



**Wellington Astronomical Society
2018-05 eNewsletter**

**Wellington Astronomical Society Inc.
email Newsletter for May 2018**

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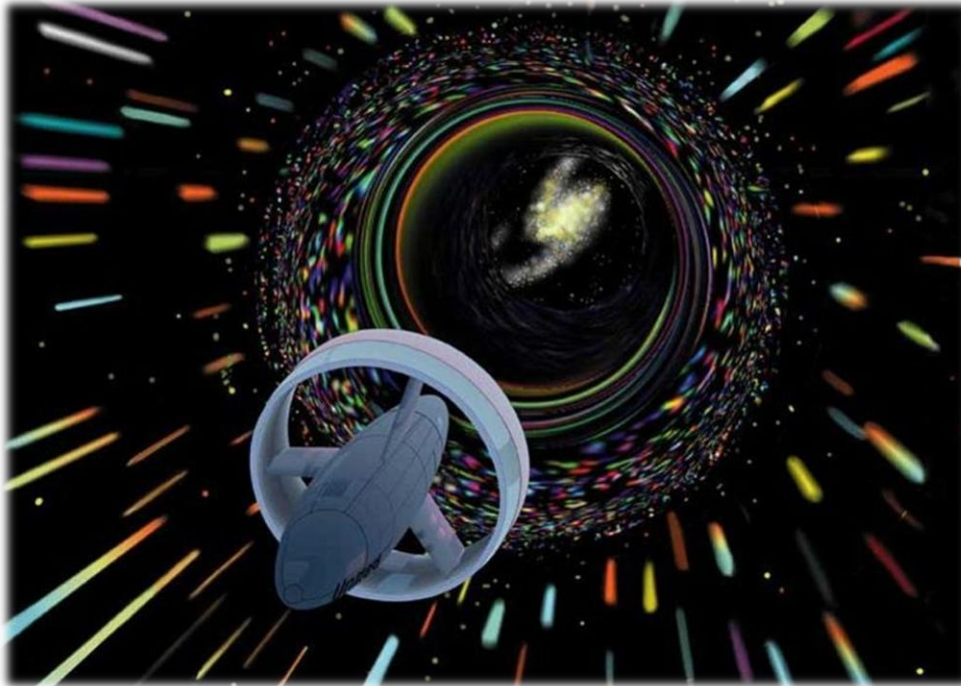
1. MAY 2018 SOCIETY MEETING

The next WAS meeting will be held on Wednesday 2nd of May 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 May
2. Astronomy News
3. Main talk at 8:00pm

Can It Fly? – Gabriela Perez



Can a spaceship breathe and evolve? Can we sail on sunlight to our nearest stellar neighbour? Are we willing to shift how we think about time, energy and cost? Are all the leading interstellar spacecraft designs doomed to become expensive earth-bound bonfires or could they actually fly?

Modern technological advancements are pushing back the boundaries previously limiting interstellar space exploration, making way for a new generation of spacecraft. Let's turn on our infinite improbability drive and jump into the wormhole with Gabriela Perez for an exploration into the plausibility of some spacecraft designs and how we need to shift our thinking so we can travel into space and between the stars

Gabriela spends a lot of time talking to people about space. She operates the telescopes at Space Place at the Carter Observatory twice a week and is one half of a small start-up 'Fishhook Science Studios'. Together they create alternative hands-on workshops to make science accessible and fun for adults. She is deeply interested in how to make complex ideas and theories relatable to everyone and how to incorporate tactile learning to the way we teach the sciences. Gabriela has some formal education in astronomy and engineering but most of her learning has been outside on a dark night with a telescope chasing down globular clusters and fuzzy galaxies.

2. EVENTS

2018 RASNZ Conference - Friday 4 – 7th May, 7:00 pm, The Arts Centre, Christchurch.

ACTIVITIES	VENUE INFORMATION	RASNZ ANNUAL CONFERENCE CHRISTCHURCH 2018
<p>PRE-CONFERENCE ACTIVITY On Friday 4th May, Delegates have the opportunity to visit to the Canterbury Astronomical Society Observatory at West Melton. The tour can be booked through the conference registration form. Pickup time 1pm, return to city by 4pm. Cost \$25.00 pp</p>  <p>CONFERENCE DINNER The Conference Dinner will be held on the Saturday evening in The Great Hall at the Arts Centre. Guests will be offered a complement drink, and then a cash bar will operate thereafter.</p> 	<p>the Arts Centre is one of the most significant collections of heritage buildings in New Zealand and has a rich history. Styled on old English College traditions, the buildings have been linked to some of our nation's key developments in arts and science. the Arts Centre buildings are tied to the establishment of Canterbury College - now the University of Canterbury - and two of the city's secondary schools. the Arts Centre suffered significant damage during the 2010-2011 Christchurch earthquakes. A full and detailed restoration project is underway and expected to be completed by 2019-2020. This includes rebuilding the Observatory tower for the historic Townsend Teecce Telescope once restoration is completed.</p> <p>Conference Sponsors and Supporters</p>        	 <p>4th-6th MAY 2018 in THE GREAT HALL at the ARTS CENTRE FOLLOWED BY VSS SYMPOSIUM</p> <p>Hosted by CANTERBURY ASTRONOMICAL SOCIETY INC</p>

[The Royal Astronomical Society of New Zealand \(RASNZ\) Annual Conference](#) will be held this year in Christchurch over the weekend of 4th - 6th May 2018. This conference is hosted by Canterbury Astronomical society and will be held in the magnificent Great Hall at the Arts Centre.

The VSS Symposium will follow the conference, starting Sunday evening 6th May.

The 2018 Conference guest speaker will be Dr Katie Mack from the North Carolina State University, and the Fellows' Lecture will be delivered by, Steve Butler.

Space & Science Festival



After inspiring more than 10,000 people in Wellington, the Space & Science Society have been working hard to bring you the 5th annual festival.

[Space & Science Festival](#) is a mix of spectacular science displays, science talks and hands-on classroom activities – all created by a group of volunteer parents, teachers, scientists, engineers and technologists. Our focus is on

making science accessible and providing fun experiences that encourage young minds and nurture their interest in a wide range of STEM activities.

This year, the Festivals' Lead Partner, Genesis School-gen, will be showcasing their hands-on child-friendly activities so you can explore the world of energy.

[Tickets](#) are available only through the Space & Science Festival website and have been kept to a very modest \$10 per person thanks to our lead partner Genesis School-gen. Ticket sales will support both Onslow College, Greytown Primary School and the Space & Science Festival.

Space & Science Festival @Greytown - Saturday 5th May, 12:00 – 4:00 pm, Greytown School.

The [programme](#) includes:

- Amadeo from Otago Museum will be offering you a stunning mix of science demonstrations – don't forget your cameras!
- Marvel at the beauty of Bio-luminescent Bacteria, thanks to the team from Siouxsie Wile's team at BrightEnz.
- Enjoy a variety of talks and presentations in the hall including one of New Zealand's leading astrophotographers, Stephen Chadwick and his presentation, 'A journey through the Cosmos'.
- Not to mention a feast of creative technology to play and learn.
- View our nearest star, the Sun, through solar telescopes provided by the Wellington Astronomical Society.

Dark Skies & the Science of Light - Saturday 5th May, 6:00 pm, Carterton Information Centre.

The Space & Science Festival and the [Martinborough Dark Sky Society](#) have collaborated for the first time to bring a series of informative short talks in the Wairarapa.

Focused on helping the local community understand the science of light (no experience required!), how modern LED lighting evolved and the work going on locally to ensuring we protect the beautiful dark skies we are still lucky to have in the Wairarapa.

"Dark Skies and the Science of Light"

Space & Science Festival Talk Series
 Carterton Events Centre
 May 5th 6pm - 9pm

International Guest Speaker
 Dr John Barentine
 International Dark Sky Association

SPACE & SCIENCE FESTIVAL

Martinborough Dark Sky Society

- Dr Brendan Darby & Dr Franck Natali will take us on a journey through the world of light: From electromagnetic waves to light emitting diodes.
- Ellery McNaughton from Auckland University will talk about her PhD research on light pollution in New Zealand.
- Dr John Barentine from the [International Dark Sky Association](https://www.darksky.org/) will talk about the associations work to protect our natural night time environment world-wide, highlighting successes in New Zealand.
- Dr Stephen Chadwick's exhibition of Astrophotography will be in the lobby, entitled **A journey through the Cosmos**, which will be a visual reminder of the immense beauty of our night skies.
- View the spectacular night sky through telescopes provided by the Wellington Astronomical Society.

Space & Science Festival Onslow@Night - Saturday 19th
 May, 6:00 – 10:00 pm, Onslow College.

- We have multiple Tesla Coils this year, including some which can play music!
- Wellington Astronomical Society are long time partners and will show you the night skies through their telescopes
- Marvel at the beauty of Bio-luminescent Bacteria, thanks to the team from Siouxsie Wile's team at BrightEnz.
- Running throughout the event will be a full programme of interesting and thought-provoking talks from some of New Zealand's leading and innovative organisations, and award-winning Educators.

Space & Science Festival Onslow@Day - Saturday 26th
 May, 12:00 – 4:00 pm, Onslow College.

- Thanks to support from the US Embassy, we welcome back two incredible Woman in Science – NASA's Dr Yvonne Cagle, and Dr Jen Blank
- Victoria University are showcasing a full range of their capabilities with toys and demonstrations across their science, and engineering faculties. Suitable for small and adult sized kids, you'll enjoy Makey

Makey, Edison Robots, Quivervision's 3D augmented reality, and an LED jewellery workshop. For more cool experiences, visit Vic Uni themed rooms including Science of Us, Science Beneath the Sea, Science of the Brain, and Science of NZ

- Amadeo from Otago Museum will be offering you a stunning mix science experiments – don't forget your cameras!
- Wellington Astronomical Society are long time partners and will show you the sun through their solar-scopes
- Space Place Education bring us a hands-on, tactile fun environment to play and create – make a moon-dust tower, a galaxy or star cluster
- The House of Science and Open Science Lab will provide hands-on science experiences to enjoy
- And, for anyone who's ever wanted to launch a rocket or fly a plane we didn't forget you!
- Running throughout the event will be a full programme of interesting and thought-provoking talks from some of New Zealand's leading and innovative organisations, and award-winning Educators.

Students in Space Conference - Monday 21st May, 5:30 – 9:00 pm,
Rutherford House - Lecture Theatre 2, Victoria University



This Conference, hosted by the [NZ Students' Space Association](#), is for all space enthusiasts, star gazers, planet explorers, rocket engineers, mathematicians, designers, "I-wonder-what's-out-there?" thinkers... basically anyone and everyone who has ever wondered about humanity's role in space.

[Students in Space](#) is a conference that is aimed to inspire students, from secondary to tertiary, to realise their potential to contribute to the future of the space industry. With a distinctly New Zealand focus, it will comprise talks by speakers on a range of topics, including the philosophy, law, science, and engineering of space. Bring your whanau, friends, co-workers and experience some out-of-this-world speakers.

3. ASTRONOMY NEWS



Global Astronomy Month (GAM), organized each April by Astronomers Without Borders, is the world's largest global celebration of astronomy. [GAM 2018](#) brings new ideas and new opportunities, again bringing enthusiasts together worldwide to celebrate Astronomers Without Borders' motto One People, One Sky. The main theme for this year is Earth's lone natural companion that has fascinated cultures around the world – the Moon. The Wellington Astronomical Society was involved in three events over the three days 20 – 22 April.

- **Fly Me to the Moon** – On the Friday evening, Eric Dalhstrom gave a wonderful talk at the Lower Hutt War Memorial Library on the past and future of lunar exploration to an audience of 90! A [video](#) of the talk and the [presentation](#) are available online. WAS provided telescopes for observing. It was mostly cloudy but we did get to see Jupiter and its moons.



- **Global Astronomy Month Star Party** – Saturday evening we were down at the Wellington waterfront. It was buzzing with people going to the Noodle Night market and the Killers concert. It was a clear night and many who looked through our telescopes were amazed at
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seeing the craters on the Moon and Jupiter and its moons. ([Images](#))

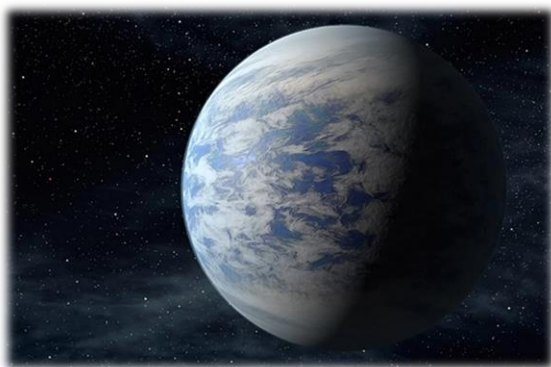


- **Sun Day** – We were back at the Wellington waterfront on Sunday with solar scopes so those passing by could observe our nearest star, the Sun. There were activities for the kids to create their own constellations and look at the Sun through solar eclipse glasses. ([Images](#))



Thanks to everyone who came along and helped out with the events!

[No Way Out? Aliens on 'Super-Earth' Planets May Be Trapped by Gravity](#)



"Super-Earth" planets are giant-size versions of Earth, and some research has suggested that they're more likely to be habitable than Earth-size worlds.

But a new study reveals how difficult it would be for any aliens on these exoplanets to explore space.

To launch the equivalent of an Apollo moon mission, a rocket on a super-Earth would need to have a mass of about 440,000 tons (400,000 metric tons), due to fuel requirements, the study said. That's on the order of the mass of the Great Pyramid of Giza in Egypt.

"On more-massive planets, spaceflight would be exponentially more expensive," said study author Michael Hippke, an independent researcher affiliated with the Sonneberg Observatory in Germany. "Such civilizations would not have satellite TV, a moon mission or a Hubble Space Telescope."

[It's The Hubble Telescope's 28th Birthday, And It Celebrated By Taking A Spectacular Image](#)



NASA's Hubble Space Telescope is, incredibly, about to reach its 28th birthday. And to celebrate, NASA has released a stunning view of a nebula inside our galaxy snapped by the lucky observatory.

Hubble was launched on April 24, 1990, and despite some initial hiccups, it has ultimately become a huge success story. In its 28 years in orbit, it has made 163,500 orbits of our planet and snapped more than a million images.

This latest image shows us the Lagoon Nebula, a vast stellar nursery 55 light-years across that's located 4,000 light-years from our planet.

But in about 1.3 million years, a star named Gliese 710, which is about 60 percent as massive as the Sun, is projected to interrupt the Sun's hermitude by crashing right on through the far-flung reaches of the solar system.

4. NIGHT SKY FOR MAY 2018

The [Night Sky for May 2018](#) courtesy of the University of Canterbury.

5. CONTACTS

The following members were elected to Council at the Nov 2017 AGM

President: Antony Gomez (president@was.org.nz) - 021 253 4979
Vice President: Duncan Hall (vice-president@was.org.nz)
Secretary: Becky Bateman (secretary@was.org.nz)
Treasurer: John Homes
Membership Secretary: Janine Bidmead (membership@was.org.nz)
Website: Peter Woods (webmaster@was.org.nz)
Telescope custodian: Chris Monigatti

Council: Andrew Fuller, Chris Monigatti, Frank Andrews, Janine Bidmead, Murray Forbes, Peter Woods, Roland Idaczyk

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Website: 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)
