

UNDER THE MILKY WAY

Wave Rock, Hyden
Western Australia

An evening of
Cosmos, Culture
& Landscape

Presented by
Dr John Goldsmith, Celestial Visions
& Ivan Gian-Piero, Boogie Image

A National Science Week 2021 supported initiative,
hosted by Shire of Kondinin

Under the Milky Way

Wave Rock, Western Australia.

Astrophotography community event, 27th August 2021

Wave Rock, near Hyden in Western Australia, is an iconic natural landscape, major tourist attraction, a place of significance to Aboriginal communities, and also a superb location to experience the splendour of the dark night sky and our Milky Way.

As part of National Science Week 2021, an evening community event, on-country, was hosted at Wave Rock, showcasing a superb selection of astronomical photography from Western Australian astrophotographers, literally immersed in and amongst the Wave Rock landscape. The event included a special screening of the fantastical films of George Melies, the famous early French cinematographer, who created highly imaginative films, such as *"Trip to the Moon"* (1902) and *"The Eclipse"* (1907).

The 2021 Wave Rock event provides an important opportunity to celebrate, showcase and share past results from the National Science Week (2019) initiative "Capturing the heart of our Milky Way galaxy directly overhead", a collaboration between Westonia CRC and Dr John Goldsmith / Celestial Visions. That project successfully recorded "full dome" 360° images of our Milky Way directly overhead at several locations, including Wave Rock.

The Milky Way theme continues with the first ever presentation of a new version of the famous and evocative song *"Under the Milky Way"*, by The Church. The new version, by Ivan Gian-Piero / Boogie Image, captures the mystery and wonder inspired by the Milky Way.

The Astrophotography Exhibition features a selection of superb Western Australian astrophotography including the work of Dr John Goldsmith, Brendan Mitchell, Martin Grasl and James Athanasou. The exhibition is complemented by on-location practical night-sky viewing with telescopes. Guests and visitors have the opportunity to directly experience the wonder and majesty of our Milky Way and southern night sky.

Acknowledgements

Funder / sponsor

Administration support

Concept, project development, management and delivery

Host agency and authority

Astrophotographers

Telescope operators

Collaboration partner

Music production

Films

Preferred associate gallery of Celestial Visions

Supporters and associates

Print production

Exhibition resource supplier

Endorsement

- **National Science Week 2021 (Australia) is gratefully acknowledged, as part of the Inspiring Australia – Science Engagement Programme.**

- **Kondinin Community Resource Centre.**

- **Dr John Goldsmith / Celestial Visions / www.celestialvisions.com.au**

- **Shire of Kondinin**

- **James Athanasou**

- **Dr John Goldsmith / Celestial Visions**

- **Brendan Mitchell**

- **Martin Grasl**

- **Brian Sture (Cosmic Landscape Photographers Group).**

- **Martin Grasl**

- **Boogie Image / www.boogieimage.com**

- **Original: "Under the Milky Way" by The Church. Written by Karin Jansson and Steven Kilby. Released on the 1987 "Starfish" Album.**

- **Cover version (2021): composed by Ivan Gian-Piero, backing vocals by Paige McNaught. Produced by Steven Callan.**

- **"Trip to the Moon" (1902) and "The Eclipse" (1907) by George Melies**

- **Lost Eden Gallery / Dwellingup**

- **The World at Night / www.twanight.org**

- **Bolt Coffee**

- **Snap Midland**

- **80-20**

"We recognise your efforts to promote science in Western Australia through astrophotography and wish you the best with your future endeavours". Linda Dawson, Deputy Director General, Department of Jobs, Industry, Science and Innovation. 15 July 2021.

Celestial Visions is not affiliated with Curtin University, University of Western Australia, International Centre for Radio Astronomy Research, Astrofest, Astrofest Committee, Astronomy WA Network or Astro tourism WA.



Embark on a fanciful journey of the fantastical films of George Melies, featuring two short magical movies from the 1900's.

Cinema wouldn't be what it is today without the ingenuity and imagination of George Melies, the pioneer of cinema special effects. His ground-breaking works of adventure, sci-fi, fantasy and illusion produced at the emergence of the silent film era of the 1900's, astonished audiences then and his genius still captivates imaginations today.

Embark on a fanciful journey as we present two of George Melies astronomically inspired short films, "A trip to the Moon" (1902) and "The Eclipse" (1907). New music soundtracks have been composed to accompany the two short movies, streamed via immersive audio headsets to the audience.

A treat for the eyes and ears as you marvel and wonder at the most mystical places and peculiar people you'll meet along the way.

Produced by www.boogieimage.com



Ivan Gian-Piero

The Astrophotography Exhibition

Our innovative outdoor astrophotography exhibition presents images in a “light-box” format, with illuminated, glowing images. The light-boxes create a sculptural, structural form, immersed amongst the iconic landscape of Wave Rock. The exhibition features the images of Western Australian astrophotographers, Dr John Goldsmith, Martin Grasl, James Athanasou and Brendan Mitchell.

The images include “astro-landscapes”, featuring Uluru, Sandstone, Southern Cross, Fremantle, Stairway to the Moon (Roebuck Bay), Gantheaume Point (Broome), Lake Ballard, and images of

the Great Pyramid and the Mosque of Sultan Hassan. Our deep-space images include the moon, star clusters and diffuse nebulae, and an annular solar eclipse.

Credits Annular Solar Eclipse © James Athanasou, Mistral's Jewels & Omega Centauri © Brendan Mitchell, Tarantula Nebula, Gantheaume Point & Bay of Rainbows © Martin Grasl, all other photos © Dr John Goldsmith.

Statement of values Dr John Goldsmith, founder of Celestial Visions, has contributed over the last 35 years towards the advancement of astrophotography and astrophotographers, by the promotion of images with integrity, the encouragement of good photographic practices, the recognition of the work of photographers, and the showcasing and celebration of high quality photography. Within this context, Celestial Visions has articulated a statement of values, for ethical astrophotography. The statement of values are available at www.celestialvisions.com.au

Landscape series



Southern star trails & natural arch at Sandstone. Western Australia.



Milky Way above Uluru. Australia.



Southern Cross. Western Australia.



Lunar eclipse & ellipse art project. High Street, Fremantle, Western Australia.

Portrait series



Comet Hale-Bopp
& Great Pyramid.
Giza, Egypt.



Stairway to the Moon.
Roebuck Bay, Broome,
Western Australia.



Comet Hale-Bopp
& Mosque of Sultan Hassan.
Cairo, Egypt.

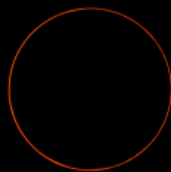


Illumination at Lake Ballard.
Western Australia.

Square format series



"Road to the Centre
of the Universe".
Western Australia.



Annular solar eclipse.
Greenough, Western Australia.



Mistral's Jewels.
NGC 3293 & 3324



Bay of Rainbows,
(Sinus Iridum), Plato
and Copernicus,
Moon.



Under the Milky Way,
"Inside Australia" at
Lake Ballard.
Western Australia.



Omega Centauri.
Globular star cluster.



Venus ocean reflection.
Gantheaume Point, Broome,
Western Australia.



Tarantula Nebula.

About the photographers

Dr John Goldsmith is a Western Australian based astrophotographer, author and exhibition curator. He has curated 40 astrophotography exhibitions since 1999 and has authored two books featuring Western Australian astrophotography. His PhD research investigated cultural astronomy and the documentation, communication and sharing of Aboriginal sky knowledge, associated with Wolfe Creek Crater (East Kimberley) and the Square Kilometre Array radio astronomy initiative in the Murchison region of Western Australia. His research applied a suite of digital imaging for site documentation, including astronomical timelapse and 360° spherical imaging. Dr Goldsmith is a member of The World at Night (www.twanight.org), a leading global network of astronomical landscape photographers. He is the director and creative developer behind Celestial Visions (www.celestialvisions.com.au) and his astro-imaging is exhibited worldwide. In 2011, John was awarded the inaugural De Laeter Science Engagement Scholarship, (Gravity Discovery Centre, Western Australia). In 2017, Dr Goldsmith featured in the international 5 part film series "The Borderless Sky, The Aboriginal Sky of Australia". In 2019, Dr Goldsmith provided consultation, project guidance and logistical support for the film "Fireball, Visitors from Darker Worlds" by Clive Oppenheimer and film-maker Werner Herzog, released in 2020. The Western Australian Museum engaged Dr Goldsmith to coordinate input from 13 astrophotographers, now featured in permanent exhibitions as part of the New Museum Project. Web site: www.celestialvisions.com.au



James Athanasou began astrophotography in 1979 in his backyard in Perth, taking constellation photos with a Canon SLR camera. In 1986, he photographed Comet Halley from Mt Magnet, using a motor controller he built for guided photos on a Meade tracking mount. In 2010, James accompanied John Goldsmith during Goldsmith's 2010 PhD fieldwork to Wolfe Creek Crater (East Kimberley) as a Gingin Observatory representative. James accomplished new timelapse and astrophotography at the crater. His memberships includes five years with the Astronomical Society of Western Australia (ASWA), the Astronomy Group of Western Australia (since inception), Gingin Observatory (five years), Astronomical Society of the South West (four years) and the Murdoch Astronomical Society (five years). His photographs have been published in Sky & Telescope, a book called "Drawn to Mt Magnet", and the West Australian newspaper.



Martin Grasi Science has always been a passion for Martin and his Physics and Chemistry teaching career in Western Australia and overseas has allowed Martin to nurture and develop the interests of students in many areas of science, including astronomy and cosmology. In recent years Martin has developed a keen interest in astrophotography using a DSLR camera, as well as observing and photographing the Sun, Moon and other deep sky objects using his Takahashi and Dobsonian telescopes. Martin enjoys participating in the astronomy community and contributing to photography events where he can share his passion and skills with others. Several of Martins photographs have been published in books and exhibited in various exhibitions that are currently being exhibited around Western Australia. He won the Frederick DE Houtman Award for the best Magellanic Cloud photograph in 2020, and has received various high commendations for his work.



Brendan Mitchell grew up on cattle stations in the Northern Territory, before moving to Western Australia. His experiences in the Northern Territory led to a growing appreciation of the night sky and this developed into a love of astrophotography. Brendan operates Astronomy Academy, a successful business based on the teaching of deep sky astrophotography and related services and products. He hosts a lively astrophotography discussion group <https://www.facebook.com/groups/astronomyacademydiscussion>. The Astronomy Academy meets on a monthly basis, providing an accelerated learning environment for deep sky astrophotography. Brendan holds a Civil and Construction Engineering degree specialising in Structural Design from Curtin University with his primary experience in mid to high rise buildings.



Under the Milky Way

In 2010, I attended a national science conference in Hobart, Tasmania. The high-level science talks over the week were highly technical, interesting, intellectual, but, after the week-long conference, also quite mind-numbing. After the conference, I walked into Salamanca, into the fresh air of a Tasmanian mid-winter's evening. There, I discovered the "Festival of Voices" winter singing festival, and on the Saturday night, the main event. Led by the remarkable choir master, Stephen Taberner (of "The Spooky Men's Chorale"), Taberner led 2000 people in a community choir event in the heart of Salamanca and around an enormous bonfire, singing the highly evocative and famous song "*Under the Milky Way*" by The Church. The event was superb. Engaging, moving, a major community event and very quirky. Fantastic!

"Under the Milky Way" was written by Karin Jansson and Steven Kilby and released on the 1987 "Starfish" Album, by *The Church*. This famous and well-loved song has been covered by Jimmy Little, Jessica Mauboy and Sia, to name a few. For our 2021 Wave Rock event, Ivan Gian-Piero / Boogie Image was commissioned to produce a new version of "Under the Milky Way".

The song lyrics are mysterious, evocative and wonderfully open to interpretation. What is the "something shimmering and white" that "leads you here despite your destination"? And of course, the famous line "Under the Milky Way tonight". But then, the lyrics pose a very intriguing proposition "wish I knew what you were looking for" and "might have known what you would find". What is it that you are looking for? If you look, you may find. If you search under the Milky Way, what will you find?

These are questions for you to explore and discover in your own way. Whatever your background and perspective is, whether you are a farmer, business owner, artist, a scientist, a dreamer, an explorer or adventurer, a song writer, a traveller, or person of faith, your perspective can influence what you perceive, what you look for and what you may find. The Universe is yours to discover. Go and explore, and discover for yourself.

Dr John Goldsmith

Capturing the Heart of our Milky Way Galaxy Directly overhead

The 2019 National Science Week sponsored project

Did you know that there is one zone on our planet in which it is possible to view the centre of our Milky Way galaxy pass directly overhead? This occurs only in the southern hemisphere, at an approximate latitude of 30° south. Such a remarkable view of our galaxy can be seen at different times of the year, and at different times of the night, but only from the southern latitude of approximately 30° south. Nowhere else in the world is this view possible. This special opportunity gave rise to an astrophotography initiative, put forward by Celestial Visions, Dr John Goldsmith and the Westonia Community Resource Centre.

Our project **Capturing the Heart of our Milky Way Galaxy directly overhead!** set out to record this view, via 360° astrophotography, from the dark sky location of the Goldfields / eastern Wheatbelt region, Western Australia. The project was accomplished via a specialised astrophotography expedition, at the dark sky locations of Westonia (near Southern Cross) & Wave Rock (Hyden), and the highly light polluted inner-city location of the South Perth foreshore. The 360° photography

uses special equipment and image processing techniques, in which between 10 and 50 mosaic images are combined via image processing, to generate a high quality, accurate, image. When presented in a "mini-planet" format, the horizon appears as a continuous circle, with the sky in the centre, and dark ground on the outside. The zenith, the point directly overhead, appears in the very centre of the image. The result (rear cover) records a remarkable view of the heart of our Milky Way galaxy appearing directly overhead, from the rock dome above Wave Rock.

Project participants

Project management and co-ordination.
Exhibition host and collaborative partner.

Field photography.
Image processing and additional field photography.
Virtual Reality coding advice.

- Celestial Visions.
- Westonia Community Resource Centre.
- Dr John Goldsmith.
- Luke Busellato.
- Dr Chris Thorne.

Dr John Goldsmith

