

UMnyele weZulu

EDITION 6: 13 AUGUST 2024 XXXII IAU GENERAL ASSEMBLY CAPE TOWN, SOUTH AFRICA

Commission C5 Cultural Astronomy

IAU GA arrives in Africa for
the first time

By Dr Steven Gullberg - Pg 3

Dutch Ambassador visits IAU-
GA2024 Pg 5

BlackHoleFinder app launched in eight languages

Hunting black holes just became easier - Pg 8

Honouring the “invisibles” with celestial namesakes - Pg 14



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Table of Contents

We are well into the second week of IAU-GA2024 and the end is in sight. In this 6th issue of UmnyeLe weZulu. In here you will find an article on the BlackHoleFinder app, now available in eight languages; an interview with Dr Lindsay Magnus who reflects on the first IAU-GA hosted in Africa; and new names for recently discovered minor planets. You can also read about the winner of the Astronomers Got Other Talent show and even find a little more of that Mother City hospitality.

- 03 Introducing Commission C5 Cultural Astronomy
- 04 WG4 Sessions: Astronomy for equity and Inclusion
- 05 Dutch Ambassador visits IAU-GA2024
- 06 Rising Stars: PhD Prize Winners at the GA
- 08 New BlackHoleFinder app launched in eight languages
- 10 Public Astronomy Talk: The nature of the Universe
- 11 Cultural Exchange Evening
- 12 Interview: Dr Lindsay Magnus, Director, SKA-Mid Telescope
- 14 Honouring the “invisibles” with celestial namesakes
- 16 Music of the spheres
- 17 Get some more of that Mother City hospitality
- 18 Question of the Day
- 19 Scenes from the Gala Dinner



Upcoming Events

- Live observing with Murriyang, CSIRO's Parkes radio telescope
13 Aug
- Executive WG on Dark and Quiet Sky Protection
15 Aug
- Cosmic Echoes art exhibition
06 to 15 Aug
- Invited Discourse:
Prof Natalie Batalha
13 Aug
- IAUS 392 Neutral hydrogen in and around galaxies in the SKA era
13 Aug
- Kavli Prize Lecture
13 Aug
- Voting sessions for General Assembly Resolutions
14 Aug
- The Cosmic Savannah
14 Aug

(Background) A nearby spiral galaxy. Image: NASA, ESA and the Hubble Heritage Team (STScI/AURA).

(Top) Chankillo painting by Jessica Gullberg. See Pg 3 for story.



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XXXII IAU GENERAL ASSEMBLY

CAPE TOWN, SOUTH AFRICA, 2024

Overall Support for the First IAUGA in Africa

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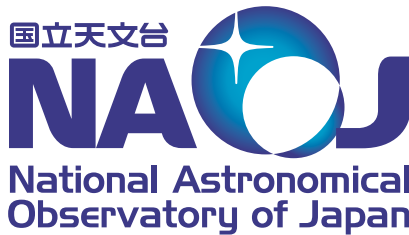


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Introducing Commission C5 Cultural Astronomy

By Dr Steven Gullberg

A new asset for Cultural Astronomy support throughout the IAU



Working Group for Astronomy in Culture and the New Commission C5 Cultural Astronomy

Venue 2.64-2.66

Date Tuesday, 13 August

Time 08:30 to 10:00

Astronomy is perhaps the oldest of sciences and ancient cultures used it to guide their daily lives by creating timekeeping systems based upon the movements of the Sun, Moon, and their constellations. The relationship with the sky is fundamental for the development of human societies, and each culture has its own way of employing their sky images and their perception of natural cycles that enhance their way of life. Astronomy has been used for activities such as when to plant and harvest and it allows cultures to anticipate seasonal changes based upon observable recurring events driven by the Earth's orbit about the Sun. The sky is important as a source of cultural reflections about their realities, and it also provides a means of determining the times for periodic religious observances. Cultural



(Above) June Solstice Sunrise (JSSR), is a common theme in Cultural Astronomy. Zenith is for the time of the zenith Sun. (Top) Dr Steven Gullberg.

Astronomy examines the role of the sky for both ancient and contemporary peoples, and it explores cultural diversities in the context of natural science.

Cultural Astronomy deals with the astronomy of past cultures, present indigenous cultures, as well as other aspects of contemporary astronomy in culture. It is a field of study that fills a distinct need for cultural understanding. This new commission embraces all goals of the IAU Strategic Plan 2020-2030 and is well poised to enhance these efforts as Cultural Astronomy is very much an attention-getter for the public and is also a fascinating way to introduce students to astronomy.

The Commission is the IAU's focal point for Cultural Astronomy - how it relates to other branches of astronomy, for research in the field, and for educating the public regarding examples of how astronomy is being and has been used in culture throughout world history. The commission exists to support any part of the IAU and additional organizations that desire such assistance.

To learn more, the former will meet on Tuesday 13 August. There will be a general discussion and three Cultural Astronomy presentations. All are welcome to attend!



The Llamas, (mother and baby) are two of the dark constellations that the Incas saw in dark patches in the Milky Way. Painted by Jessica Gullberg.

WG4 Sessions: Astronomy for Equity and Inclusion

Astronomy must be accessible to everyone



Inclusive astronomy was one of the themes selected for the IAU100 centenary celebrations in 2019.

The Working Group Astronomy for Equity and Inclusion began in Division C, Commission 1, chaired by Amelia Ortiz Gil and Dominique Proust. During the 2018-2021 triennium, it moved to the Executive Committee. The Working Group's goal is to make astronomy inclusive and equitable by making it accessible to everyone and promoting best practices and standards for equity.

The EC Working Group for Equity and Inclusion is excited to share invited and contributed talks as well as poster presentations on Thursday 15 August. These talks and posters cover a breadth of topics in equity, inclusion, diversity and accessibility (DEIA) in astronomy. Since the IAU is an international organisation, each member country will have unique needs and implementation strategies in addressing DEIA. However, the fundamental principle is "Astronomy is for All". Similarly, while we often consider these issues in the context of outreach or education, it is equally important that they are addressed within the professional astronomical community.

The first oral session focuses on themes of equity and

By Susana Deustua



inclusion, starting with the Working Group's directions for the next triennium, and then continuing with contributed talks on the history and practice within astronomy, and measurements (aka metrics) for assessing the impact of implementation.

The second oral session focuses on diversity and inclusion, discussing what effective programmes look like. The theme of the third oral session is making astronomy accessible for people with physical disabilities and learning differences. The two poster sessions showcase the breadth and depth of activities around the world that address DEIA, including the use of sonification, accessible software, and citizen science to name a few.

We invite you to join us in these important discussions.



CSIRO Australia Telescope National Facility

**Live observing with Murriyang, CSIRO's
Parkes radio telescope**

This is your chance to control the 64m-dish radio telescope live and remotely. Observe pulsars and learn about our **PULSE@Parkes** education program.

Tuesday 13 August, 3 PM to 5 PM

Dutch Ambassador visits IAU-GA2024

By Christina Thöne

Her Excellence Joanne Doornewaard, the Ambassador of the Netherlands in South Africa paid the XXXIInd IAU GA a visit

On Monday, the GA was honored by the visit of Her Excellence Joanne Doornewaard, the Ambassador of the Netherlands in South Africa and Mr Berto Bosscha, Education and Science Attaché of the Dutch embassy. Mrs Doornewaard and Mr Bosscha were greeting in the entrance hall by Paul Groot and Patrick Woudt, passing by Brian Schmidt also gave them a warm welcome.

They spent time walking around the exhibition hall and were particularly impressed by the inflatable planetarium, considering a visit later on. This was followed by meeting with Kevin Govender, Ewine van Dishoeck, Charles Takalana and Marieke Baan. Kevin thanked the ambassador for making the GA even more special by her visit and stressed that meetings are there to bring people together. Historically and still today, the Netherlands have a close connection to South Africa.

Ewine explained the general structure of the IAU followed by Kevin's extensive explanation of the Office of Astronomy Development (OAD) with its headquarters here in Cape Town, using astronomy as a tool for advancing education and technology. He explained the decidedly hybrid set-up of the GA and the public availability of talks to make it as accessible as possible for everyone. Even the local communities will profit by donating the poster screens to local schools, which will help schools in townships to engage remotely with astronomers and scientists.

The ambassador, a trained landscape architect, was very interested in the different large, world-class astronomy projects going on and has herself visited the MeerKAT site last October. What also drew her attention were the OAD programs on training tour guides in astronomy and mental health. She told herself about the strong

connection between local traditions in Namibia, where she has been visiting, and their connection to the sky. Empowering and enabling local communities to profit from astronomy is a big step forward.



All participants agreed that big chances have been taken place in the past decade. While 20 years ago astronomy was dominated by white people from "Western countries", in this meeting, lots of astronomers from Africa present, ask questions and are deeply involved. Bilateral programs between the Netherlands and SA can make an impact, and follow-up meetings are planned.

(Top) Her Excellence Joanne Doornewaard, the Ambassador of the Netherlands in South Africa.

(Above) Her Excellence Joanne Doornewaard, the Ambassador of the Netherlands in South Africa (2nd from right) and Mr. Berto Bosscha (right), Education and Science Attaché of the Dutch embassy with Patrick Woudt (left) and Paul Groot (2nd from left)



Rising Stars PhD Prize Winners at the GA

Johanna Casado PhD

PhD Prize 2023 recipient, Division C
Education, Outreach and Heritage



I am Johanna Casado, and I obtained my PhD last year. Currently, I work at the University of Mendoza, Argentina. Our research group focuses on multimodal data access, primarily astronomical, through sonification and haptic signals. I am very grateful to have received the PhD Prize of Division C for my Doctoral thesis and for the opportunity to participate in the IAU GA 2024. This event is a wonderful opportunity to showcase our approach, where we propose that researchers use sonification as a complement for both data analysis and relevant publications.

In addition to two presentations during the first week, where we demonstrated the relationships and scope of our work as well as the techniques used, there will be two virtual poster presentations on 15 August (about tactile models and sonoUno with Jupyter Notebooks). I invite everyone to participate in our contributions, each offering different content and perspectives. You can also contact us through the event platform or via email at sonounoteam@gmail.com.

I am deeply thankful for this opportunity. Being part of an event like this is both a pleasure and a tremendous opportunity.

The IAU PhD Prizes are awarded annually to recognise the outstanding work being done by doctoral students in astrophysics around the world. Every year, each IAU Division has the opportunity to award one of these prizes to the candidate it feels has conducted the most remarkable research in the previous year. Additionally, the Divisions can also jointly award one PhD Prize-at-large. Recipients of these prizes receive registration to attend the GA following their award, where certificates are presented during Division Days.

IAUS 392: Plenary Talks Neutral hydrogen in and around galaxies in the SKA era



**Looking to the future of HI observations:
from pathfinders to the SKA**
Dr. Kristine Spekkens (Queen's University in Canada)



Looking to the future of simulations of HI
Dr. Kyle Oman (Institute for Computational Cosmology,
Durham University)



**Gas, gas, everywhere... Building the Frame-
work for Neutral HI Detections in the SKA Era**
A/Prof. Michelle Cluver (Swinburne University
of Technology)



IAUS 392

08:30-10:00
Tuesday, 13 August
CTICC Audi 1



IAU General Assembly Session WG6:

Executive WG on Dark & Quiet Sky Protection

12 & 15 August 2024



Session:
12 August (10:00 – 17:00)

Commission B7 Business Meeting:
15 August (13:00 – 15:00)

(South Africa Standard Time = GMT + 2h)



**Cape Town International
Convention Centre**

in Cape Town, South Africa

In-person and online



noirlab.edu/science/events/websites/iauga24wg6



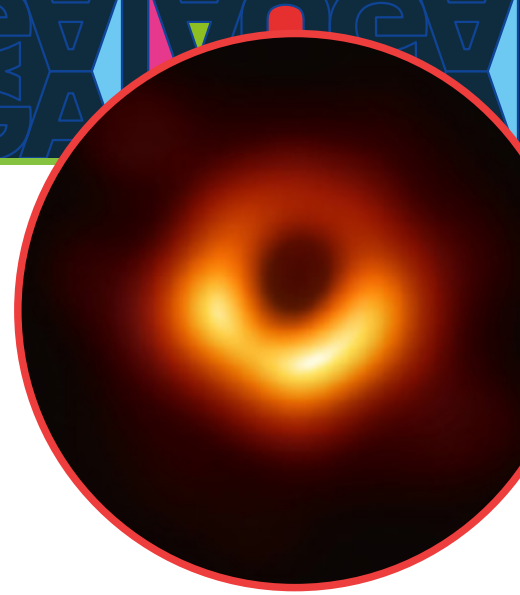
#wg6-dark-quiet-skies for the WG6 session

New BlackHoleFinder app launched in eight languages

New app puts black hole hunting in the palm of your hand

The Dutch Black Hole Consortium has launched an eight-language version of the BlackHoleFinder app that citizens all over the world can use to help identify newly formed black holes. Previously, the app was only available in Dutch and English. Now Spanish, German, Chinese, Bengali, Polish, and Italian have been added to greatly increase the number of people who can access the citizen science app in their native language. The expansion of the app was announced at the 32nd IAU General Assembly in Cape Town, South Africa. The app is available on the Apple and Android app stores, and via <https://www.blackholefinder.org>

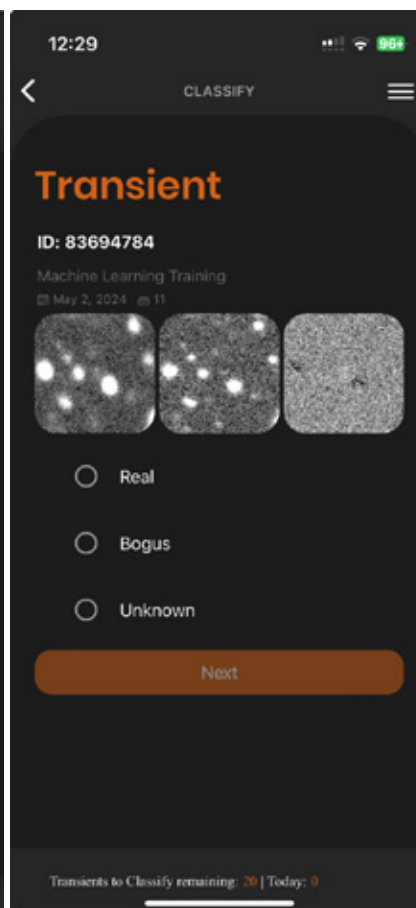
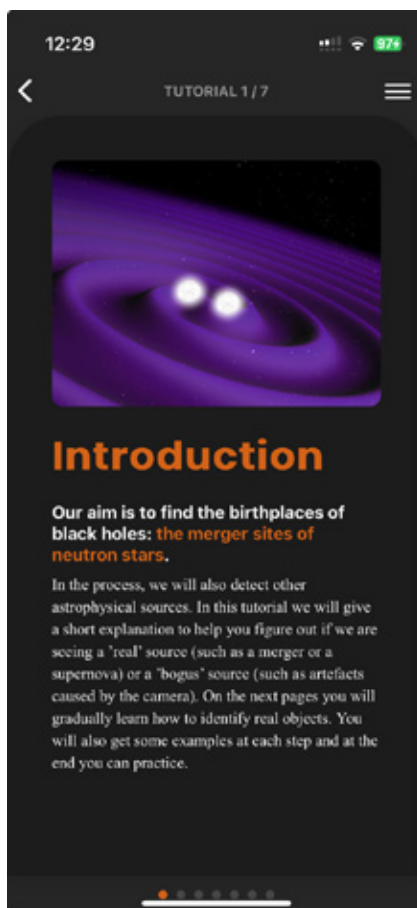
Citizens around the world are asked to help scientists identify which sources are interesting and should be followed up quickly, such as potential kilonovas, and which sources are false sources. The first, and so far only, kilonova observation took place on 18 August, 2017: a brief flash of light caused by the merger of two neutron stars. This merger resulted in the formation of a stellar mass black hole. This was a unique event; in addition to a flash of light, gravitational waves were also detected during the milliseconds leading up to the merger. This was the first



(Top) First image of a black hole using Event Horizon Telescope observations of the center of the galaxy M87. Image: Event Horizon Telescope Collaboration.

(Below) Screenshots of the BlackHoleFinder app.

time astronomers were able to detect both gravitational waves and electromagnetic radiation from the same event.



BlackGEM

When a kilonova occurs, the emitted light fades rapidly; it can only be detected for a few days. Astronomers must act quickly, pointing telescopes to the patch of the sky where the gravitational wave signal originates from. However, gravitational wave detectors, such as LIGO and Virgo, can only determine the location to a degree of accuracy that typically spans hundreds of square degrees of the sky (for reference, the full Moon covers about 0.2 square degrees), an area much larger than the field-of-view of the largest telescopes.

To determine the location more precisely, astronomers have built custom-made telescopes to quickly pinpoint the faint optical signal associated with the merger event. A recent addition to these telescopes is the sensitive

BlackGEM array of telescopes in Northern Chile. As soon as a gravitational wave signal is detected, BlackGEM will quickly scan the large region of the sky identified by the gravitational wave detectors. Comparison of these new observations with previous observations provides a large number of candidate sources. One of these could be associated with the gravitational wave event, a kilonova caused by the merger of two neutron stars and the birth of a new black hole.

False sources

“However, as a large area of the sky has to be searched, false, non-astronomical, signals can occasionally slip through our AI-trained filters”, explains Steven Bloemen, project manager of the BlackGEM telescopes at Radboud University in the Netherlands.

A common cause of false signals is light reflecting off communication satellites. “In addition, BlackGEM also detects signals with an astronomical origin, but which are unrelated to the kilonova signal we are looking for, such as near-Earth asteroids”, says Peter Jonker, PI of the citizen science app and co-PI of the Dutch Black Hole Consortium at Radboud University.

Citizens around the world are asked to help astronomers identify which sources are fake, and which sources are potential candidates for the kilonova for follow-up observations. “Even among these astronomical signals that are not due to the kilonova, there are events related to black holes”, says Radboud University’s Paul Groot, PI of BlackGEM.

AI training

Due to the high number of candidate sources, astronomers use artificial intelligence techniques to decide which sources are interesting and which can be ignored. Steven Bloemen adds, “People are still much better at identifying patterns than our algorithms. By using the app, citizens across the world can help train our AI-algorithms to distinguish between real and false sources and pinpoint the most interesting candidate sources more quickly.”

Citizens who have shown to be skilled in spotting real sources can now trigger follow-up observations with the Las Cumbres Observatory (LCO) network of robotic telescopes. Jonker adds, “The LCO director has kindly agreed to allow citizens to trigger their 0.5m telescopes to conduct follow-up observations directly from the app when the user deems this necessary. This will provide

information astronomers can use to determine if one of the real events is a kilonova.”

Daniëlle Pieterse, PhD student at Radboud University is involved with BlackGEM and the development of the BlackHoleFinder app, “Potential kilonova signals can come at any time, day or night, and they evolve rapidly so time is of the essence. That’s why the BlackGEM data is available in the app around the world only 15 minutes after the telescope has taken the data. The global reach of the app is also crucial – with citizen scientists across the whole world, there will always be someone awake to quickly check the new data.”

During each observing night in Chile, the BlackGEM array will discover new transient sources. The app users can also see the telescope live in the app. No data can be taken during daylight hours in Chile, so then no new data will be available. The LIGO/Virgo/KAGRA consortium of gravitational wave detectors will be actively “listening” for new gravitational wave detections until June 2025.

More information

The BlackHoleFinder app, developed by the Dutch company, DDQ Pocket Science, is available on the Apple and Android app stores in English, Dutch, Spanish, German, Chinese, Bengali, Polish, and Italian. There is also a desktop version available at <https://www.blackholefinder.org>

Contact

Peter Jonker and Daniëlle Pieterse

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Website: <https://www.ru.nl/personen/jonker-p>

On site at the IAU GA in Cape Town:

Steven Bloemen

Department of Astronomy; Institute for Mathematics, Astrophysics and Particle Physics, Radboud University, The Netherlands

E-mail: S.Bloemen@astro.ru.nl

Dutch Black Hole Consortium: <https://www.dbhc.nl>

BlackGEM: <https://astro.ru.nl/blackgem/>

About NOVA

www.astronomie.nl

The Nature of the Universe

Public Astronomy Talk about what we know and what we don't know

Our ancestors looked up at the sky and asked questions about our existence in the Universe, as we do today. We now know that the Universe is very old and very large, and is changing with time. It has evolved from a very small size in the distant past to its present size, with a succession of physical processes leading to structures emerging at many scales. Precise astronomical data attained by many telescopes confirms this solid understanding. But there are key issues that are not understood. What is the nature of dark matter? Of the dark energy underlying an accelerating expansion rate at recent times? What physics underlies its dynamics before the Hot Big Bang epoch? Why is there a Hubble tension? Is there an age problem? Other issues are, Why is vacuum energy as



Prof George Ellis

small as it is? How did quantum fluctuations lead to classical structure? We don't know the spatial topology of the Universe, or if it is spatially infinite. Above all, we don't know how it came into existence, nor why it allows any life at all to exist. I will claim that the future of the Universe is not yet determined yet, and no, we don't live in a simulation.

Tuesday, 13 August
18:15
[Book your free ticket here](#)

(Above) Prof Georg Ellis. Image: David Monniaux. Wikimedia



Kavli Prize Talk: David Charbonneau

Co-winner of the 2024 Kavli Prize
in Astrophysics

The Terrestrial Worlds of Other Stars



XXXII TAU GENERAL ASSEMBLY

CAPE TOWN, SOUTH AFRICA, 2024

Kavli Prize Lecture

12:00-13:30
Tuesday, 13 August
CTICC Audi 1

Cultural Exchange Evening

Experience the rich heritage of astronomy

Join us for a captivating evening dedicated to the rich tapestry of cultures and their historic relationship with the skies. Through diverse artistic expressions including storytelling, music, dance, and poetry, we delve into the timeless wisdom of indigenous knowledge.

This gathering is more than just a celebration; it's a journey of discovery and connection. As we come together beneath the vast African skies, we honor our shared humanity and the profound bond we hold with the cosmos. Each story shared, and each dance performed is a testament to the enduring spirit of our collective heritage.

At the heart of this event lies a deep reverence for indigenous wisdom. From the celestial navigation techniques of ancient seafarers to the intricate star maps passed down through generations, these cultural narratives offer invaluable insights into our place in the



universe.

As we revel in the beauty of cultural exchange, we invite you to bring forth the treasures of your own heritage. Let us weave together a vibrant mosaic of traditions, celebrating the diversity that enriches our shared experience.

This evening is a celebration of unity, of the threads that bind us as one human family. Join us under the African skies as we embrace the wisdom of our ancestors and chart a course toward a brighter, more connected future.

Together, let us honor the legacy of indigenous knowledge and celebrate the beauty of cultural diversity.

#AfricaLookUp Cultural Exchange Evening

With Mam Gcina Mhlophe,
UP Ovuwa & Ithemba Youth Choir



XXXII TAU GENERAL ASSEMBLY

CAPE TOWN, SOUTH AFRICA, 2024

19:00-21:00

Tuesday, 13 August
CTICC Auditorium
and online

For more info and to
book tickets
CLICK HERE

Dr Lindsay Magnus SKA-Mid Telescope Director

Dr Lindsay Magnus talks about the SKAO's key place in African astronomy



By Dr Lindsay Magnus

“ The past two weeks have represented an important milestone for astronomy in Africa.

As a proud Capetonian, I was delighted when it was announced that the first IAU GA on the continent would be held not only in my home country, but in my home city, and where the SKA Observatory hosts one of its two Science Operations Centres.

It's been a chance to tell people how we're building some of the world's largest radio telescope arrays, but also an opportunity to demonstrate not just the breadth of scientific expertise here in South Africa, but on the continent as a whole.

The fortnight has provided some memorable highlights.

We were pleased to welcome some delegates to our SKA-Mid telescope site in the Northern Cape. It's always a pleasure to introduce new people to the majestic site of the MeerKAT array (which I had the privilege to be directly involved in) - then watch their faces as we tell them we'll be adding a further 133 dishes to form SKA-Mid!

As well as the scientific opportunities our telescopes present, it's also been great to talk about the other factors that make our observatory so unique - not just in scope, but in our ways of work.

For instance, it spoke volumes about our equality, diversity and inclusion (EDI) commitments that we celebrated South Africa's Women's Day on 9 August by fielding an all-female speaker panel to our day-long event: SKA Observatory: exploring a universe of possibilities. The session was a real success and provided a great unified overview of the observatory's many facets.

Meanwhile, Friday 9 August was also International

Day of the World's Indigenous Peoples - a chance to tell people about the intergenerational benefits we're providing for local communities at our telescope sites, generating skilled jobs across the multi-decadal lifespan of the SKA project, uplifting the local economy and delivering on our human capital development commitments. Our new Indigenous art exhibition available at the GA, Cosmic Echoes, also aims to embody that commitment to culture and heritage.

We work hand-in-hand with local people at the site of SKA-Mid in the Karoo, and with the Wajarri Yamaji, Traditional Owners and Native Title Holders of the land our SKA-Low telescope is being built on, at Inyarrimanha Ilgari Bundara, the CSIRO Murchison Radio-astronomy Observatory.

It's a foundational principle of our observatory to commit ourselves to equity, sustainability and human capital development, and it's rewarding to have such tangible and lasting examples of our work beyond the science to share with visitors at our fantastic SKAO pavilion.

If you've not visited the pavilion yet, then please drop by. Like the arrays we're building; it's hard to miss! And it's packed with interactive exhibits, information screens and actual SKAO telescope hardware that our knowledgeable team are happy to show you around. We are laying the foundations, both literally and figuratively, for global astronomical discoveries right here in Africa.

It has been a fantastic fortnight for the SKAO, and a tremendously successful event for South Africa and the wider continent - one which I and my colleagues are proud to have been involved with. And of course, we look forward to seeing everyone in Rome for the next one!”

the cosmic savannah



ICS Live Show

Prof Brian Schmidt
Nobel Laureate



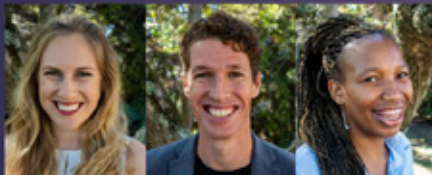
Dr Nicole Thomas
Jim Buckee Fellow

FREE LIVE SHOW !!

CPT INTERNATIONAL CONVENTION CENTRE

14 AUGUST 2024 @ 19:00

OPEN TO THE PUBLIC



Hosted by Drs Jacinta, Daniel & Tshiamiso

thecosmicsavannah.com



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As part of the IAU GA astronomy2024.org



OPEN TO THE PUBLIC

The Cosmic Savannah podcast showcases Afro-centric astronomy to the public. It is produced and hosted by myself, Dr Tshiamiso Makwela, from IAU OAE/MPIA/UCT, and Dr Daniel Cunnam, the Science Engagement

Astronomer at the South African Astronomical Observatory.

This coming Wednesday 14th Aug we are having a live show at the CTICC at 7pm, as part of the IAU GA. We will be interviewing two special guests:

- Prof Brian Schmidt, winner of the 2011 Nobel Prize in Physics and former vice-Chancellor of the Australian National University.
- Dr Nicole Thomas, a Cape Town-born early-career astronomer and graduate of the South African National Astronomy and Space Science Program.

CLICK HERE
for more information
and to
book your tickets

Honouring the “invisibles” with celestial namesakes

By Laura Hiscott

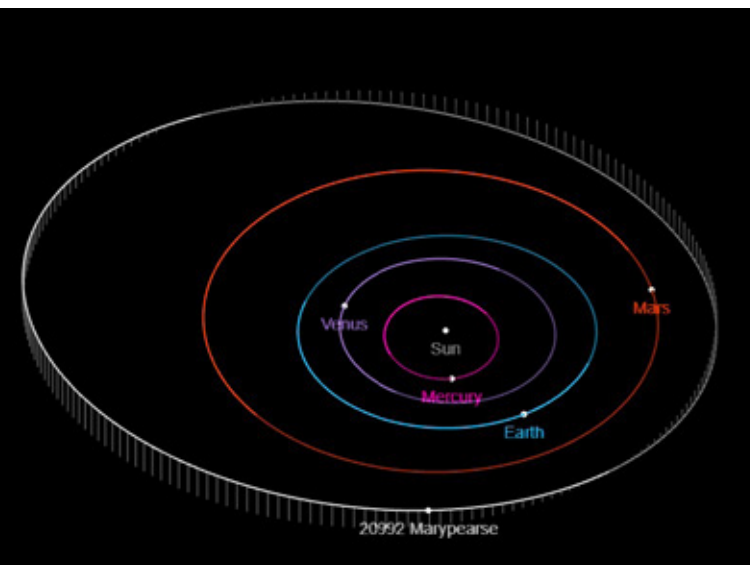
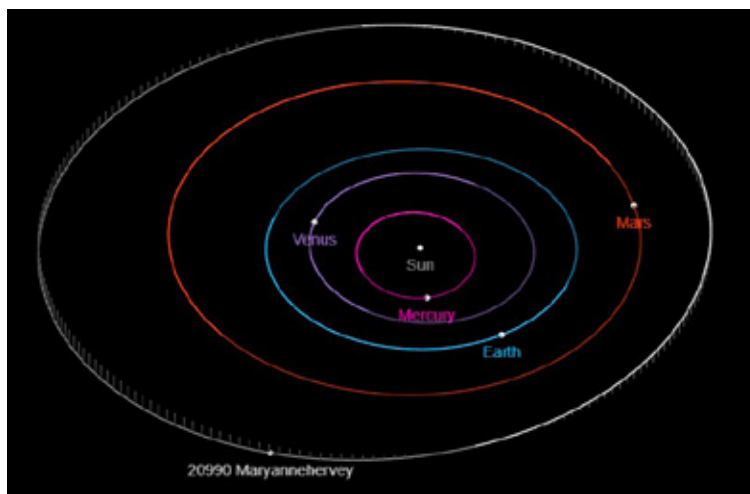


The women behind the famous men get their just due

The IAU GA is largely forward-looking: anticipating major observing campaigns; discussing the next-generation facilities under construction; and debating the big cosmic questions that are yet to be answered. But while we look to the future, it is also worth reflecting on the history of astronomy, how we got to where we are now, and honouring those who have made contributions.

On this theme, Christiaan Sterken, President of Commission C3 History of Astronomy, spoke last week about our “intangible cultural heritage” – the details and characters in the story of astronomy that we are less aware of.

It’s a subject close to Christiaan’s heart, as he has been engaged in a special project in recent years. His friend and colleague, the astronomer Henri Debehogne, is credited by the IAU Minor Planet Center with the discovery of more than 700 minor planets in our Solar System. The discoverer of these objects usually has the opportunity to name them, but that’s a lot of names to think of. Shortly before Henri died in 2007,



he asked Christiaan to continue the work of naming these celestial bodies.

In particular, he wanted to honour the “invisibles” – those people who are less well known, but who played a central role in the successes of more famous historic figures. “You know the kind of people I like,” Henri said to Christiaan, when he entrusted him with the task.

In a timely announcement just before Women’s Day, Christiaan announced the new designations of three minor planets, all named after women. “It is my belief that behind – or besides or before – every famous man there is a strong woman,” says Christiaan. “I, therefore, proposed to the IAU that three of these objects be

named after women.”

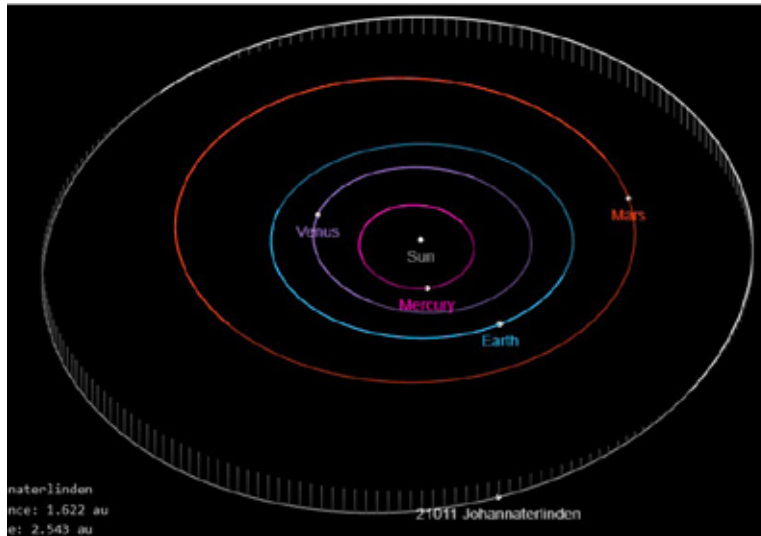
(Top) Christiaan Sterken

(Above and next page) Images from the NASA JPL website showing the position of the minor planets at 0h UT on 9 August, Women’s Day in South Africa.

Each of the women also has a connection with South Africa. Mary Anne Hervey (1796-1838) assisted her husband, Fearon Fallows, an astronomer at the Royal Observatory at the Cape, with observations and also independently discovered comet C/1830 F. When Fallows died in 1831, Hervey brought his papers and unpublished data back to England.

Mary Pearse (1802-1861) supported her husband, Thomas Maclear, while he was working on a geodetic survey at the Cape of Good Hope between 1841 and 1848. Mary died in 1861 and they are buried together on the grounds of the South African Astronomical Observatory in Cape Town.

Johanna Helena Terlinden (1920-1989) was a lifelong



coauthor with her astronomer husband, Theodore Walraven. She was the driving force behind the concept and design of a unique spectrophotometer that he devised at the Leiden Southern Station in Hartebeespoort, South Africa.

Each of these women now has a minor planet officially named in their honour: 20990

Maryannehervey, 20992 Marypearse, and 21011 Johannaterlinden, and you can find the orbit and location of each one on the NASA JPL website.

Christiaan hopes that similar symbolic gestures can be extended to more people in future, bringing to light the contributions of more figures who we may never have heard of, but who have helped to advance our understanding of the Universe to where it is today.

Invited Discourse Speakers



Prof Natalie Batalha
(UC Santa Cruz)

"A Front Row Seat to Exoplanet Discovery with Performances by Kepler, TESS, and JWST"



INVITED DISCOURSE

Natalie Batalha takes us on a whirlwind journey of exoplanet discovery missions

Tuesday 13 August

17:15-18:15

CTICC Audi 1



XXXII TAU GENERAL ASSEMBLY

CAPE TOWN, SOUTH AFRICA, 2024

Music of the spheres

By Laura Hiscott

Meet the Astronomers Got Other Talent Winner

You may have heard of the “music of the spheres” or *musica universalis*, an ancient Greek idea that the motions of the various heavenly bodies combine to create harmonies that, depending on their quality, can influence our lives on Earth. Modern astronomy may have left this idea behind, but that doesn’t mean it can’t merge with music in other ways.

Proof of this comes in the form of Steve Sottie, who is both an astronomer and singer/songwriter. He wrote an anthem called *GO Africa!* specifically for the IAU General Assembly and performed it together with a choir at the opening ceremony last week. As Bobby Brown, the host of the evening, pointed out, this was the first song ever written by an astronomer for an IAU GA.

Steve also performed *GO Africa!* at the Astronomers Got Other Talent show on Friday evening, as well as another song he wrote in appreciation of the role of fathers. After an online vote, and despite some strong competition from other singers, dancers, musicians and poets, Steve won the show. A stellar example of blending science and art.



(Top and Above) Steve Sottie, accompanied by the choir, performing his *GO Africa!* anthem, which he wrote specifically for the General Assembly, at the opening ceremony.

(Below) Steve Sottie at Astronomers Got Other Talents show



Get some more of that Mother City hospitality

Cape Town is a city that invites exploration beyond our famous tourist attractions, offering countless hidden gems where the locals gather to relax, eat, and enjoy life at a slower Capetonian pace. To experience the city like a true Capetonian, these spots provide an authentic taste of local culture, from vibrant markets and cozy coffee shop clubhouses to beloved neighbourhood eateries. Whether you're in the mood for a casual wine night or a weekend market stroll, these destinations will help you immerse yourself in the everyday rhythm of Cape Town's diverse culture.

Bo-Kaap Deli

Nestled in the heart of Cape Town's historic Bo-Kaap neighbourhood, it is a beloved spot where locals gather to savour the authentic flavours of Cape Malay cuisine. This iconic eatery offers a warm, welcoming atmosphere with its vibrant decor and friendly staff. Whether you're indulging in a classic bobotie wrap or enjoying a bowl of "tamatie bredie", the deli provides a genuine taste of Cape Town's rich culinary heritage.

Oranjezicht City Farm & Market

The Oranjezicht City Farm & Market, set against the stunning backdrop of Granger Bay at the V&A Waterfront, is a bustling weekend destination where Cape Town locals come to enjoy farm-fresh produce, artisanal foods, and a vibrant community atmosphere. This open-air market is a feast for the senses, offering everything from organic fruits and vegetables to freshly baked bread and gourmet street food. It's the perfect spot to mingle with locals,

sample some of the finest local fare, and even pick up a few unique souvenirs. The market's laid-back vibe and picturesque setting make it a must-visit for anyone looking to experience Cape Town like a local.

Open Bottle Nights at Tamboers Winkel

Tamboers Winkel, a cozy neighbourhood bistro tucked away in Tamboerskloof, hosts Open Bottle Nights that have become a cherished tradition among Cape Town's wine lovers. Every Saturday, locals gather here to enjoy a relaxed evening of local wine. Keep an eye out for wine tasting evenings and daily hot meals posted on their Instagram. With its rustic charm, delicious comfort food, and intimate atmosphere, Tamboers Winkel offers a quintessentially Capetonian experience, making it a perfect spot for those looking to unwind and socialise like a true local.

Ollie's Coffee (OSCS Clubhouse) in Sea Point

Ollie's, located in the vibrant Sea Point neighbourhood, is a hidden gem for coffee aficionados and a go-to spot for locals and cyclists in the know. This unpretentious café is known for its expertly brewed coffee, friendly service, and cosy ambiance, making it a great place to start your day or take a break from exploring the city. Whether you're grabbing a quick flat white on your morning walk along the Promenade or settling in for a leisurely chat with friends, Ollie's offers a slice of everyday life in Cape Town, where the coffee is always good, and the vibe is always welcoming.



Question of the Day

What is your reason for participating online? How has the experience been so far?

This GA has been deliberately set up for participants connecting online while having a near in-person experience. Almost 600 online-only participants have registered for the GA!

Nnameka's reason is obvious: "I am participating online because I didn't get enough funding on top of the IAU support." Abbas is an amateur astronomer providing Persian translations for IAU activities. "Attending the IAU GA was one of my dreams since an early age, but I long hesitated since I did not formally study astronomy, despite

many citizen science and outreach programs." Maybe we should think about another category of membership?

Everyone had some technical hiccups, though, and interaction could be difficult for some because of the time zone. Samantha Wong watches the youtube recordings, "Whenever is convenient in my time zone, but it does feel a bit disconnected. It would be really nice to be there in person, to meet new people and get to do all the tours and activities!"

Clearly, the hybrid format is great, but does not completely replace an in-person experience.



Samantha Wong from McGill university in Montreal, Canada, running the "astrobites" webpage and doing research on Galactic sources of very high energies with VERITAS.



Nnaemeka Onyekachi Njoku-Achu from Nigeria, doing research on the interaction between cosmic rays, the Earth magnetic field and the climate.



Abbas Mokhtarzadeh, amateur astronomer from Waxhaw, NC, US and IAU co-National outreach coordinator for the US, during his 2024 eclipse trip to Sinaloa, Mexico.

Scenes from the Gala Dinner





PROGRAMME WEEK 2

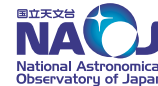
	MON - Aug 12th	TUE - Aug 13th	WED - Aug 14th	THU - Aug 15th
08:30 – 10:00 Morning plenary	Offices plenary	IAUS 392 plenary	IAUS 393 plenary	IAUS 394 plenary
10:00 – 10:30 Morning e-poster & coffee break	Division e-poster	IAUS 392, 393, 394 FM4, FM8, FM9, FM10, WG1, WG2	IAUS 392, 393, 394 FM4, FM8, FM11, FM12, WG3	IAUS 392, 393, 394 FM9, FM10, FM11, FM12, WG6, WG4
10:30 – 12:00 Morning oral session	Parallel Division Oral Sessions	S 392-1 S 393-1 S 394-1 WG1-1 WG2-1	FM4-1 FM8-1 FM9-1 FM10-1	S 392-4 S 393-4 S 394-4 WG1-4 WG3-2
12:00 – 13:30 Lunch			FM4-4 FM8-4 FM11-1 FM12-1	S 392-7 S 393-7 S 394-7 WG6-1 WG4-1
13:30 – 15:00 Afternoon oral session 1	Parallel Division Oral Sessions	Kavli Prize Talk by David Charbonneau	Young Astronomers	FM9-4 FM10-4 FM11-4 FM12-4
15:00 – 15:30 Afternoon e-poster & coffee break	Division e-poster	S 392-2 S 393-2 S 394-2 WG1-2 WG2-2	FM4-2 FM8-2 FM9-2 FM10-2	S 392-5 S 393-5 S 394-5 WG2-3 WG3-3
15:30 – 17:00 Afternoon oral session 2	9 Parallel Division Oral Sessions	IAUS 392, 393, 394 FM4, FM8, FM9, FM10, WG1, WG2	IAUS 392, 393, 394 FM4, FM8, FM11, FM12, WG3	FM4-5 FM8-5 FM11-2 FM12-2
17:15 – 18:30 Afternoon plenary	Gala Dinner	S 392-3 S 393-3 S 394-3 WG1-3 WG3-1	FM4-3 FM8-3 FM9-3 FM10-3	S 392-8 S 393-8 S 394-8 WG6-2 WG4-2
18:30 – 21:30 Various		IAUS 392, 393, 394 FM9, FM10, FM11, FM12, WG6, WG4	IAUS 392, 393, 394 FM9, FM10, FM11, FM12, WG6, WG4	FM9-5 FM10-5 FM11-5 FM12-5
		Invited Discourse: Prof Natalie Batalha	Business 2	S 392-6 S 393-6 S 394-6 WG2-4 WG3-4
		Public Talk: Prof George Ellis 18:15 - 19:15		FM4-6 FM8-6 FM11-3 FM12-3
		Cultural Evening 19:30 - 21:30		S 392-9 S 393-9 S 394-9 WG6-3 WG4-3
				FM9-6 FM10-6 FM11-6 FM12-6
				Closing Ceremony Handover
				The Cosmic Savannah Guest: Nobel Prize winner Prof Brian Schmidt 19:30 - 21:30

Background: The Milky Way above the ATCA. Image courtesy of E. Lenc.

Exhibitors



BUSINESS
EVENTS
PERTH



PUBLIC EVENTS

IN PERSON & ONLINE

#astronomy2024

07 /08 Journey into Space with Astronaut Dr. Sian Proctor

08 /08 Evening With NASA

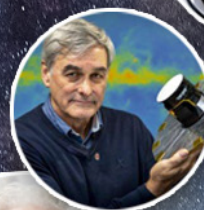
09 /08 Women in Space Science & Astronomy
The Milky Way with Prof Gerry Gilmore
Astronomers Got Talent!

10 /08 Stargazing at V & A Waterfront

13 /08 Nature of the Universe with
Prof George Ellis

13 /08 #AfricaLookUp Cultural Exchange Evening

14 /08 The Cosmic Savannah Live Show
with Nobel Prize Winner Prof Brian Schmidt.



XXXII IAU GENERAL ASSEMBLY

CAPE TOWN, SOUTH AFRICA, 2024

The team behind the design, layout, content writing and editing of the XXXIInd IAU GA newsletter includes Patrick Saunders; Guido Schwarz; Laura Hiscott; Maria Stone; Christina Thöne; Shirley Aoko; Gwen Sanderson; Marcelina Kinyumu; Daniel Cunnamo; Susan Caras



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XXXII  GENERAL ASSEMBLY

6 - 15 AUGUST 2004

Cape Town, South Africa



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