

# AfAS Newsletter

Volume 01 | Issue 04

## Message from the President

It is now almost three years since the Astronomy in Africa meeting where the sitting Executive Committee was elected to serve our community and at our next conference in March 2022, I will be passing the gavel to a new President as a new Executive Committee will be elected. Reflecting back over the past years as President, the time has passed at lightning speed, our Society and community have grown. I am very grateful for my fellow Executive Committee members and the Secretariat and the quality and quantity of work they invest in throughout the years, and I think that we should all share this gratitude.

Through our various committees and with support from the secretariat we have been able to deliver on the mandate given to us by the community. We continued to work with and receive support from our valued partners in the South African Department of Science and Innovation (DSI) and the International Astronomical Union Office of Astronomy for Development (IAU-OAD). Our growth can also be attributed to our close partnership with projects under the AfAS umbrella including the African Planetarium Association (APA), the African Science Stars Publication (ASSAP), and Africa-Europe Science Collaboration Astronomy Platform (AERAP) who have been instrumental for us to deliver on the Society's Mission, Vision, and Objectives.

AfAS is evolving into a powerful representation of the African astronomical community that it should be and that is required to improve astronomy in general on the African scientific landscape. As a society of professional astronomers, we have an important role to play, not only in engaging young people but also in empowering the next generation with the relevant skills, values and sense of agency to work together for positive change. We continue to be dedicated to contributing to the growth and development of young people in the field of astronomy through the outreach initiatives of our outreach committee. The early career committee under

our science committee is looking forward to other initiatives to support MSc and PhD students in addition to the existing early career seed research grant. We are also very proud of the work by the African Network of Women in Astronomy (AfNWA) who recently announced the call for the women in astronomy awards in collaboration with the Uppsala University International Science Programme (ISP) in Sweden. AfNWA has been involved in other work to strengthen and promote women participation in astronomy on the continent.

Proposed constitutional amendments and financial matters of the society will be reported and discussed in detail at the next general assembly where we will also discuss the introduction of membership fees. Efforts to gain society members must be increased to ensure a sustainable society going forward to support the initiatives that address the growth of the field on the continent. Therefore, efforts to convince more of our colleagues to join AfAS as members and be active must also be pursued.

Covid-19 has had a profound impact on all countries in Africa, as it has in the rest of the world. In March 2021, we transitioned successfully into a virtual conference format. We have hosted various webinars and workshops since, including the workshop on the African Integrated Observation System (AIOS). A summary of the workshop is captured in this issue of the newsletter. The preparations for the 2022 Annual Conference and General Assembly are already underway. The details of the hybrid conference have been shared via our various communication channels, registration is now open, and we are anticipating yet another successful conference.

Africa is characterised by its huge variety of cultures, practices, and the necessity to forge an African identity for our society in this context is critical. The daily work of our society should be significantly coloured and driven by this diversity. I look forward to seeing you in March 2022. In the meantime, it remains for me to wish you a happy, healthy and safe 2022 ahead.

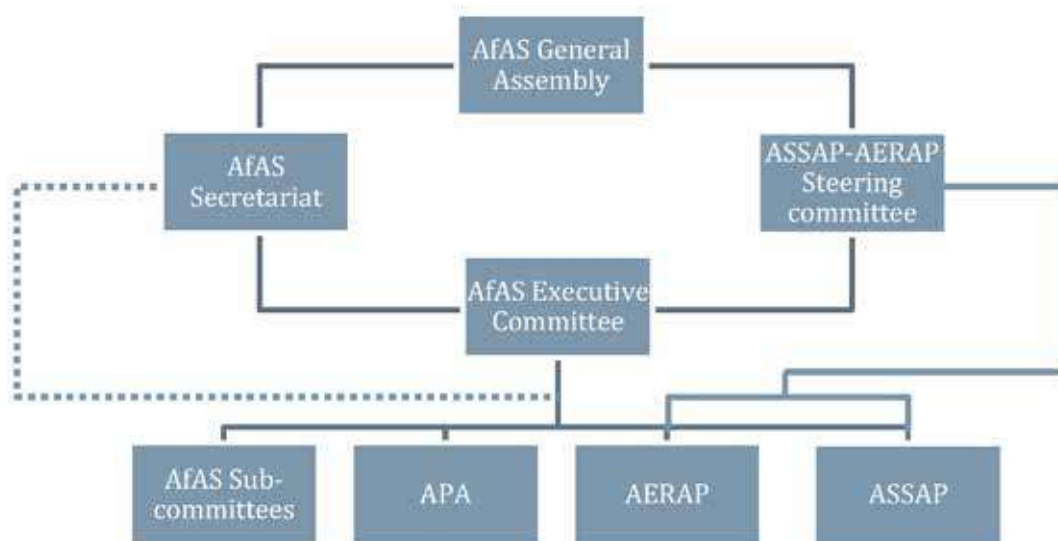


J. Mimouni  
AfAS President



# About AfAS

The African Astronomical Society (AfAS) is a Pan-African Professional Society of Astronomers. Our vision is to create and support a globally competitive and collaborative astronomy community in Africa. Our mission is to be the voice of astronomy in Africa and to contribute to addressing the challenges faced by Africa through the promotion and advancement of astronomy. Our key objective is to develop Astronomy and Human Capacity throughout the continent of Africa through a vibrant and active AfAS. The Secretariat of AfAS is currently hosted by South Africa through the Department of Science and Innovation (DSI) and our office is located at the South African Astronomical Observatory in Cape Town.



## Our Brief History:

At the 2010 launch of the African Physical Society in Dakar astronomers from across the continent and the African diaspora resolved to form the African Astronomical Society. Following this meeting, a whitepaper on the formation and the structure of the African Astronomical Society was drafted and disseminated. An Interim Working Group was formed to carry out the formation of the African Astronomical Society at the IAU Symposium in Ouagadougou. The initial Constitution of the African Astronomical Society (AfAS) was agreed to and signed by the members of the Interim Working Group at Ouagadougou, Burkina Faso on 16 December 2010. The interim Working Group consisted of members from Algeria, Burkina Faso, Cameroon, Ethiopia, Gabon, Ghana, Kenya, Mauritius, Morocco, Nigeria, South Africa, Uganda, and the U.S.A. AfAS was officially launched at the 2nd Middle East and Africa Regional IAU Meeting in Cape Town, South Africa in April 2011. However, AfAS had not been an active organization since its inception in 2017, at the 4th Middle East and Africa Meeting in Ethiopia, it was decided to bring together stakeholders and relaunch AfAS. In March 2019, the Astronomy in Africa meeting was held for this purpose, at the South African Astronomical Observatory in Cape Town, South Africa. At that meeting, a revised Constitution was approved and accepted by delegates. Our Constitution can be found at <https://bit.ly/3qDhi86>. The AfAS Secretariat was incubated by the DSI from April 2019 to March 2020 and has been fully operational since April 2020.

# NEWS FROM ACROSS AFRICA

## ONLINE ASTRONOMY AT THE GHANA PLANETARIUM

The Ghana Planetarium, the realisation of the dream of Dr. Jacob Ashong and his wife Jane, to bring astronomy and science to ordinary Ghanaians, was officially opened to the public in January 2009, and at the time, it was the first digital planetarium in Africa. Since then, around 1000 school groups have been hosted and over 40,000 visitors have had the opportunity to explore the wonders of our universe through the unique experience of a planetarium show.



Figure 1: Ghana Planetarium official opening January 2009

Credit: Jane Ashong

Covid protocols mean that the Planetarium can allow small, socially distanced group bookings. However, the weekend's public events are currently on hold. To keep some sort of connection with the visitor community during this time, two members of the Planetarium team decided to start online astronomy sessions for kids and the public.



Figure 2: A school group visit conforming to covid protocols  
Credit: Jane Ashong

#### The objectives of these sessions were to:

- Stay engaged with the planetarium audience (astronomy enthusiasts in Ghana) during the pandemic, especially kids who are curious about the universe.
- Encourage naked eye observations of the night sky by giving information about when/where to see the Moon, planets, and satellites such as the ISS.
- Keep the audience updated on current astronomy news topics and the progress of various space exploration missions.
- Allow participants to ask questions on any astronomy topic.

#### Two different types of online sessions were developed:

- A free 1-hour session for all ages once a month, titled “Everything Astronomy”
- Multiple series of 4 – 6 weekly sessions around a specific astronomy theme, for kids (for a moderate fee)

One of the recent highlights of the “Everything Astronomy” sessions was a special event focusing on the launch of NASA’s Lucy mission to the Trojan asteroids. As well as learning about the mission, the topic was brought back down to Earth with an interview with Dr. Cyril Boateng, a geophysics lecturer, and researcher at the Kwame Nkrumah University of Science and Technology (KNUST), in Kumasi, Ghana, who gave a fascinating insight into current research at Lake Bosumtwi, Ghana’s only impact crater site.

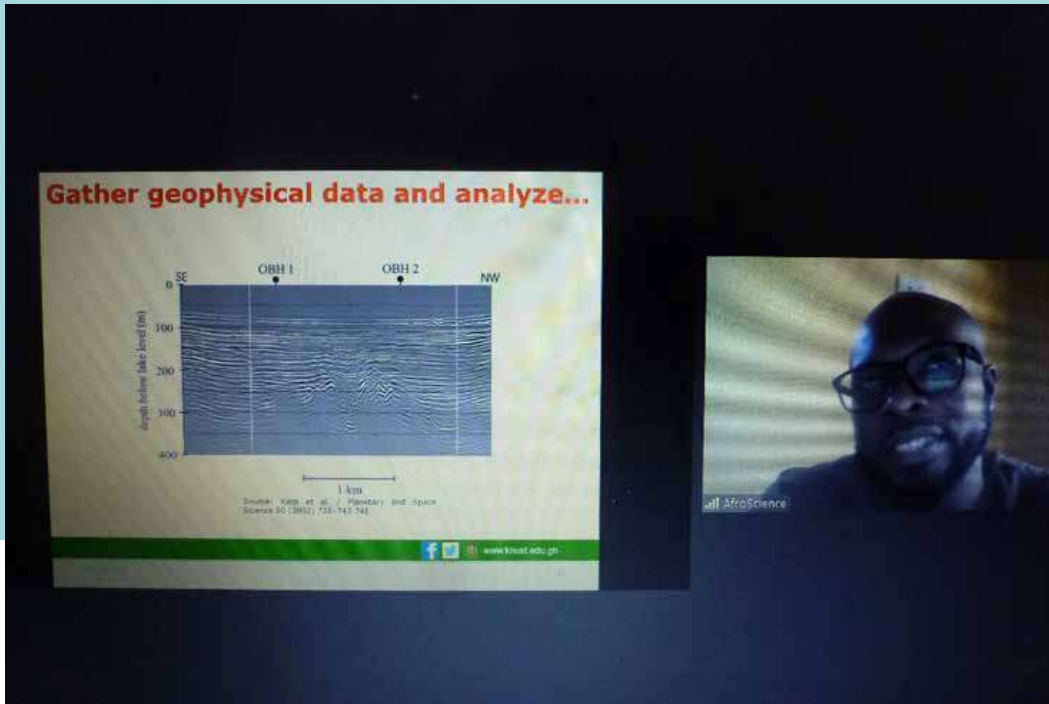


Figure 3: Dr. Cyril Boateng talking about research on Lake Bosumtwi during an online session.  
Credit: Solomon Appekey

The kid's sessions have explored various fascinating astronomical themes including "Mission to Mars," leading up to the landing of the Perseverance Rover, "Artemis Mission – Landing Humans on the Moon," which looked at living and working on the Moon, and "Looking for Life in the Universe," a special 5-day series in the school vacation which explored astrobiology and exoplanets. Short videos, animations, group projects, first-hand activities, and quizzes were included to keep the online sessions more engaging for the youngsters.


**NASA's Mission to Mars Student Challenge!**

On 18<sup>th</sup> February, NASA's Perseverance Rover will land on Mars!

- Learn about Mars and explore activities around how to design, build, launch, and land a Mars mission
- FREE online sessions will be held on Saturdays at 1pm UTC using Zoom and presented by the **Ghana Planetarium** team
- Share your work with NASA!

**Join in the excitement of the mission and register your child now!**

(Recommended age: 10+ years)



**MARS PERSEVERANCE**

Week 1: 23<sup>rd</sup> January – Learn about Mars  
 Week 2: 30<sup>th</sup> January – Plan Your Mission  
 Week 3: 6<sup>th</sup> February – Design Your Spacecraft  
 Week 4: 13<sup>th</sup> February – Launch Your Mission  
 Week 5: 20<sup>th</sup> February – Land on Mars

Image Credit: NASA JPL / Caltech

For any queries, please contact Solomon (0591 362267) or Sarah (0244 298529)

Figure 4: Poster for the Mission to Mars online sessions for kids

Two separate WhatsApp groups were created, one for adults and one for kids, to allow the discussion of astronomy topics, sharing of night sky photos, encourage night sky viewing, and answer curious questions about the universe.



Figure 5: Questions about Mars from a brainstorming session with the kids

Nothing can fully replace the experience of a planetarium show under the dome. However, these online sessions have proved popular and are a way for the planetarium to continue to bring the inspiration of astronomy to the public.

Find out more about the Planetarium: <https://www.facebook.com/ghanaplanetarium>

Author: **Sarah Abotsi-Masters**

# Ghanaian astronomers deliver DARA practical training

The SKA project brings a wave of hope, enthusiasm, and scholarship to Africa. With South Africa spearheading the development of astronomy in Africa with the AVN in eight partner countries (Ghana, Kenya, Namibia, Zambia, Botswana, Mozambique, Madagascar, and Mauritius), the progress can best be described as worthwhile and successful.

Through South Africa and the UK, a redundant 32-metre telecommunications dish has been converted into a functional radio telescope in Ghana, named the Ghana Radio Astronomy Observatory (GRAO). The radio telescope research masers, pulsars, AGN sources among other research activities. Engineers from SARAO are working round the clock to complete the last upgrades to the telescope by the mid of 2022.

UK aid through the Royal Society and Newton Fund's Development of Africa through Radio Astronomy (DARA) program has since 2015, educated many Africans in astronomy. The DARA project has spent about 4 million GBP to train the first generation of radio astronomers in the AVN countries. The project was executed through a consortium of universities and partners in the UK, EU, South Africa, and other African countries.

The DARA project recruits about ten bachelor's students in physics and relevant sciences from the AVN countries for training in astronomy over a year through a period of a year.

Astronomy development in Ghana is progressing steadily despite the covid-19 pandemic. GRAO has become a training centre for the DARA practical training. Before covid-19, instructors around the globe came to deliver the practical session of the course at GRAO, and Hartebeesthoek, South Africa, for the countries in the southern part of Africa. In achieving one of the milestones of the DARA project, astronomers from Ghana have taken up the challenge to deliver the practical session with the help of the virtual tutors. Most of the content was developed by the virtual tutors, while the local team who were beneficiaries of the DARA training, delivered the course on-site.

Students from six African countries namely, Ghana, Kenya, Namibia, Zambia, Botswana, and Mozambique, participated in the DARA practical training that took place at GRAO at Kutunse, Accra Ghana, in 2021. While at GRAO, the students had hands-on training in telescope observations, data reduction, radio frequency interference (RFI) measurements, receiver, and sun temperature measurements. Tabletop radio telescope (TTRT) operation and optical telescope viewing were also part of the practical sessions.





GRAO also continues to host students and the public for astronomy outreach and education.



*Proven-Adzri Emmanuel,  
(Ghana Radio Astronomy Observatory, Ghana Space Science and Technology Institute)*

# Open Doors on Astronomy Day

World Space Week (WSW) is an annual celebration held from 4 to 10 October in over 95 nations throughout the world, recognising two important dates in Space history. The launch of the first Human-made Earth satellite, Sputnik 1, on October 4, 1957, and the signing of the Outer Space Treaty on October 10, 1967. There is a theme for each year, and « Women in Space » was the 2021 World Space Week theme. To celebrate this important event, the Sirius Astronomy Association of Constantine, in collaboration with the youth and cultural activities direction of Constantine and as part of the activities organised by the (NOC Algeria), took the initiative to organise open doors on astronomy for the benefit of students of educational institutions and the public.

The event was hosted by the Youth Center Ahmed Saadi in Filali. A very rich program that included a scientific exhibition of the « Cosmic Symphonia

» an observation of sunspots by young people, free planetarium sessions throughout the day. Visitors had the benefit of many entertaining scientific activities and lectures. Also, there were some workshops for children, including the activity “Find your home on the map” using a giant meter-accurate geographic map placed on the ground. We recorded the strong participation of the Physics Club of the Mentouri University of Constantine, with an interactive exhibition and activity. A very remarkable exhibition also part of the event was “The Sky from Palestine” sky pictures from the occupied territories through the participation of the Palestinian Astronomical Society. The event attracted a large number of scout groups who came from different municipalities and even from far away, some people came from al Qantara in the city of Biskra, known as the gates of the desert.

*Chaima Amine-Khodja*



# VASCO Workshop for Algerian Astronomy Amateurs

Each year, Sirius Astronomy Association launches its weekly meetings at the start of the new academic year. Some Sirius members, who are part of the VASCO citizen science project (Vanishing and appearing sources during a century of observation), held a workshop on the 16th of October at Ahmad Saadi youth house in Constantine, Algeria, for both pupils and adults, on the VASCO promising project that aims to explore new sources that appeared or vanished in the sky within a century of observation. Determined to answer more questions about space mysteries and why not explore other worlds that can manage life, even a very primitive one.



The coordinator of this project in Algeria and the Middle East; Khaoula Laggoune, with the assistance of Pr. Jamal Mimouni, President of AfAS (African Astronomical Society), Zeyneb Aissani member of the communication committee of AfAS, and the animators of the Shatir saghir smarties club of Sirius gave a presentation about VASCO as a citizen science project, Khaoula then stated the aims of this project explaining how this project contributes in discovering stars that might have appeared or vanished by comparing data taken by PAN STARRS Telescope in Hawaii, USA. Khaoula highlighted how VASCO might help us find proofs or traces of extraterrestrial life and mentioned how it can help astronomers explore more exoplanets using spectrum analysis and many other goals that were once part of a science fiction script for a Hollywood movie. Finally, Khaoula elaborated on the practical side meant to be done by the participants.

It is noteworthy that the data processing is conducted through a very developed platform that works with AI. What made the participants, mostly pupils of middle school, extremely excited about it as they showed so much interest during the workshop.



*Zeyneb Aissani*

# Algerian Women in Astronomy

فلكيات من الجزائر

Conception : Khaoula Lagoune



Sarra Hayoune

Research assistant  
AMNH NYC -USA



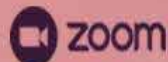
Habiba Bouhallouf

Associate professor  
at UMC-Algeria



Wassila Dali-Ali

PostDoc researcher  
Akka CNES-France



Sunday  
10-10-2021



Sirius Astronomy Association

7734 6749 838



17:30 GMT  
18:30 Algeria

## Algerian Women in Astronomy Virtual Conference

More than 6400 events in over 60 countries celebrated the accomplishments and contributions of women to the space sector and sciences, within the World Space Week 2021. To celebrate this important event, the Sirius Astronomy Association in collaboration with the African Astronomical Society (AfAS) and as part of the activities organised by the National Outreach Coordinator (NOC Algeria), hosted on October 10th, 2021, the “Algerian women in astronomy” virtual conference.

A total of 25 participants from 3 continents attended, most of them were university students. During the 3-hour conference beginning at 6.30 pm and ending at 9.30 pm, a total of 3 invited talks addressing astronomical research such as black holes and dark matter and other exciting topics, were presented.

The guests were all Algerian inspiring women who made big achievements in the astronomy and space science fields and have overcome big challenges before attaining success. These inspiring women shared their success stories in the field and their career path then gave a general idea about their research as well as their important contributions to astrophysics and astronomy.

The seminar helped many of the participants, especially young female students, to know more about this exciting domain.

Chaima Amine-Khodja

# About the Astronomical Society of Tunisia (SAT)

The Astronomical Society of Tunisia (SAT) is an NGO scientific association founded in June 1990 by a group of Tunisian amateur astronomers. Its principal aim is to promote astronomy in Tunisia (outreach and research). In collaboration with the ministry of education, the association contributed to three training sessions in astronomy for high-school students in the 1990s.



Event at Parc Bir Belhassen



Astrophotography of the sun



Maintenance of astronomical equipment

The Astronomical Society of Tunisia is made up of different commissions that create projects on different topics like:

- Solar Physics Commission: tracking and detection of solar activity Halpha and Very low frequency (radio).
- Variable Star Commission: tracking and detection of variable stars.
- Commission on the History and Popularisation of Astronomy: presentation of the history of astronomy and popularisation of astronomy.
- Commission for Astronomical Instrumentation: maintenance of astronomical equipment and instrument manufacturing.
- Ephemeris Commission and Celestial Mechanics: astronomical calculation: publication of calculations of different astronomical phenomena and publication of Tunisian zijis.
- Astrobiology commission: Studying the biological aspect of the different objects in space.
- Planetology commission: Studying the geological aspect of the different astronomical objects.
- Astrophotography: use of different photographic techniques to picture the stars.



15-second unit installation by a Canon 600D NPA at the focus of a CPC 800 showing the coma and the internal part of the dust tail of C/2020 F3 (July 8, 2020, at approximately 3 am UT)

The Astronomical Society of Tunisia is a very active association. It gives presentations, organizes workshops and observations every Saturday all year round. The Society also participates in various world events related to astronomy and space like Aeroday, International Observe the Moon Day, Sun-day, and some monthly astronomical evenings sightings.



Weekly gathering and a presentation on astronomy

**The Society has three clubs that meet twice weekly:**

- The Astro Club at the Faculty of Sciences of Tunis, the Club Zaphea at the Manouba's University campus and the Club Houcine Bouzaiene.

These clubs do presentations about various topics in astronomy, as well as observations of the Sun, the Moon, and the planets. Besides training, for example, recently, the Society organized an online training on introduction to astrophotography also participated in various astronomical evenings hosted by the City of Sciences of Tunis.

***Khaoula Charrek***

***Assistant Treasurer: Astronomical Society of Tunisia***



# Mauritanian Association for Astronomy

The Mauritanian Association for Astronomy (MAA) is a project developed by Ely Cheikh Ould Mohamed Navee to promote the science of astronomy in Mauritania, due to the huge lack of activities related to astronomy in Mauritania. The association aims to highlight the importance of this fascinating science through several activities including workshops, general conferences and competitions for children.

The association has organised several events for the year 2020/2021. In general, the activities started with an awareness of the importance of astronomy as a science, the association organised a national drawing competition for children to participate in the Space for Art Foundation's and space night project. Also, this year was marked by a very important event in partnership with the national mobilisation Nouakchott region which is ON THE MOON AGAIN, this large-scale event welcomed the general public during the three days, and it had several activities including conferences with international speakers and researchers, popularisations using models of the moon and planets to explain how to identify meteorites and observation sessions of the sun and the moon. Until now the association was supported by the national media, but it still needs so much hard work in order to convey its objectives.



Photo of ON THE MOON AGAIN activities organized in Mauritania in the Nouakchott region on 07/18/07/2021, credit **Ely cheikh Ould Mohamed Navee**.



Photo President of the Association **Ely cheikh Ould Mohamed Navee**, Photo credit **Dr. Mohamed vall Bellbellah**.



Photo of ON THE MOON AGAIN activities organized in Mauritania in the Nouakchott region on 07/18/07/2021, credit **Ely cheikh Ould Mohamed Navee**.



Photo of ON THE MOON AGAIN activities organized in Mauritania in the Nouakchott region on 07/18/07/2021, credit ***Ely cheikh Ould Mohamed Navee.***



Photo of ON THE MOON AGAIN activities organised in Mauritania in the Nouakchott region on 07/18/07/2021, credit ***Ely cheikh Ould Mohamed Navee.***



3  
ROQAIYA  
AHMED



2  
Mohamed ElMokhtar  
Cheikh



1  
Abdrrahman  
Mamoun

Photo of the National Drawing Competition for Children  
credit *Ely cheikh Ould Mohamed Navee*

# UPDATES FROM AfAS

## AfAS Outreach

Continuing from the previous newsletter, the parallel sessions on Education, Development, and Outreach at AfAS 2021 had a large attendance, with talks by speakers from across Africa, covering a wide range of topics. A summary of these talks has been compiled by us and is available [here](#).

A special session was organised during AfAS 2021 for amateur astronomers from across Africa and had participants from a diverse set of organisations. Following the discussion, a WhatsApp group was set up, which has been active since. The database of amateur astronomy associations, along with an interactive map of these, was also made public [here](#). This database will be updated periodically.

This interactive map has now been expanded to include locations of astronomical observatories, meteor craters, and sites where meteorites can be seen. This [Astronomy Map](#) can be accessed online, and each pointer in the map leads to further details. We hope that students and the public across Africa will find this map useful. Our Working Group on Affordable Mobile Planetariums (with APA and Sirius) organised an online talk by Dr. Abbas from the Cosmic Dome Project. A fish-eye lens was also ordered and was used to build a prototype projector.

We also released an [astronomy calendar](#) for 2021, which had important dates related to astronomy as well as Africa specific events.

***Niruj Mohan Ramanujam***

AfAS Outreach Committee chair

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# AfAS 2022 Seed Research Grant Call for Applications

## The AfAS 2022 Seed Research Grant Call for Applications is now open!

The AfAS Seed Research Grant is one of the flagship programs of the Early-Career Working Group to support research projects in Astronomy (including Astrophysics & Space Science) conducted by postgraduate students and/or early career researchers based in Africa.

The call for applications for the second edition of this funding scheme is now open until 31 January 2022. Three grants of up to 1,200 Euros each will be awarded to outstanding applicants selected by the AfAS Science Committee. The seed funding may be used for international/domestic travel, lodging, computer equipment, and other research-related expenses.

Look out for further details on the application on the poster in this newsletter.

# AfAS 2022 Seed Research Grant

## APPLICATION INSTRUCTION GUIDELINES

Application Deadline: 31 January 2022

The African Astronomical Society (AfAS) is the primary pan-African professional society representing astronomers from across the continent. AfAS aims to create and support a globally competitive and collaborative astronomy community in Africa and to be the voice of astronomy in Africa while contributing to addressing the challenges faced by Africa through the promotion and advancement of astronomy.

### The AfAS Seed Research Grant

Launched in 2021 by the AfAS Early-Career Researcher Working Group, AfAS Seed Research Grant supports research projects in Astronomy (including Astrophysics and Space Science) conducted by postgraduate students and/or early career researchers that are based in Africa. Three (3) grants of up to €1 200 each will be awarded to outstanding applicants in 2022. The seed funding may be used for international/domestic travel, lodging, computer equipment and other research-related expenses.

### Eligibility

- Applicants can be citizens of any country provided they are based in Africa during the 2021-2022 academic year.
- Applicants are currently conducting research in Astronomy (including Astrophysics and Space Science) at an academic or scientific research institute in Africa.
- Applicants must be enrolled in a postgraduate level or they must have received their PhD degree within the past three years (i.e. between November 2018 – November 2021).

### Application Procedure

Applicants should submit the following documents combined in one single PDF to Dr Charles Takalana ([charles.takalana@afasociety.org](mailto:charles.takalana@afasociety.org)) by 31 January 2022:

- A detailed curriculum vitae including a full list of academic publications and contact details of two academic referees;
- A research proposal (maximum 3 pages), including (but not limited to) the research title and abstract, the scientific rationale and an introductory background, the methodology and expected results, as well as the proposed timeline and a budget breakdown;
- A motivation letter addressed to the AfAS Seed Research Grant Committee;
- Proof of registration (for postgraduate students) or a proof of employment (for early career researchers) at an academic or scientific research institute.

Applicants should also arrange for signed recommendation letters from two academic referees to be sent directly to Dr Charles Takalana by 31 January 2022. At least one letter must be from a senior scientist

(e.g. the advisor) familiar with the applicant's research work.

Incomplete applications or files received after the deadline, as well as applications which do not meet the conditions of eligibility will not be taken into consideration.

If you are submitting any supporting documents in your local language, you must attach at least an informal translation into English.

### Selection Criteria

Applications will be reviewed and ranked by the AfAS Seed Research Grant Committee which is composed of senior astronomers and members from the AfAS Science Committee. Applicants will be evaluated by the jury based on the following criteria:

- Quality of the research proposal (e.g. significance of the research statement);
- Publication track record, commensurate with the applicant's career stage;
- Excellence of the overall academic performance and achievements;
- Potential impact on growing research collaborations in Africa.

AfAS reserves the right not to accept any application in part or in whole.

### Grant Awards Agreement

No funds will be released until AfAS has received the grant agreement signed by the successful applicants. The selected recipients are also required to submit a report including research updates and a financial report with expenses and scanned receipts of major expenses in the year following the award of the seed grant.

### Estimated Timeline

- Opening of the call - 15 November 2021
- Closing of the call - 31 January 2022
- Application review process - during February 2022
- Notification of successful applicants - by mid-March 2022

### Enquiries

#### Dr. Zara Randriamanakoto

Early Career Representative Officer, African Astronomical Society

Email: [zara@sao.ac.za](mailto:zara@sao.ac.za)

#### Dr. Charles Takalana

Head of Secretariat & Assistant General Secretary, African Astronomical Society

Email: [charles.takalana@afasociety.org](mailto:charles.takalana@afasociety.org)

For more details on AfAS please visit: [www.afasociety.org](http://www.afasociety.org)

# AfAS Workshop on the African Integrated Observation System (AIOS)



Astronomers and key individuals from existing and upcoming Optical/Infrared observatories from across the African continent, held a virtual workshop, on 08 November 2021, to engage in discussions on the networking of existing telescopes in line with the proposed African Integrated Observation System (AIOS). Participants shared information on the status of the observatories, instruments, and scientific capabilities, and discussed synergies with the BRICS Astronomy Association and the BRICS Intelligent Telescope and Data Network (BITDN). The AIOS will leverage on the BITDN and the initiative of the Intelligent Observatory (IO) at South African Astronomical Observatory (SAAO) that will be made up of networked telescopes that will receive, interrogate and react to discovery alerts from facilities around the world (like the Vera C. Rubin Observatory) and then automatically conduct follow-up observations of targets of interest. In the context of the African continent, the development of a network of optical telescopes is envisaged, building on the SAAO IO and incorporating facilities like the Entoto Observatory in Ethiopia, the Bouzareah Observatory in Algeria, the refurbished Kottamia Astronomical Observatory in Egypt, Oukaimeden Observatory in Morocco, plus future optical telescopes in Burkina Faso, and Kenya (KOTI). In addition, university observatories (e.g. University of the Free State's Boyden Observatory and the observatory at North-West University) will be involved.

The workshop also received a presentation on cloud technologies, data challenge aspects, and solutions the AIOS network could require. Further efforts towards the network is a need to organise more African-driven scientific meetings and technical focus workshops. Following the workshop, the observatories that will join the network are to discuss further details on protocol and the telescope time that can be dedicated to AIOS. Investigations also need to be made on detailed technical requirements for a fully automated network. The AIOS will be developed and rolled out, keeping in mind and incorporating cloud technologies and big data aspects. The workshop endorsed the concept of the AIOS and AfAS through its Science Committee has the responsibility to maintain the discussions and expand on the concept through, among other efforts forming a working group and planning a follow-up workshop.

The webpage for the AIOS project containing essential information and resources, including the recording of this workshop and the presentations is: <https://www.africanastronomicalsociety.org/african-integrated-observation-system-aios/>

# African Network of Women in Astronomy (AfNWA-AfAS)

The African Network of Women in Astronomy (AfNWA-AfAS) is an initiative that aims to connect women working in astronomy and related fields in Africa. Astronomy and space sciences are currently experiencing significant growth in Africa. With the AfNWA initiative, we would like to guarantee female participation at all levels of these new and important developments for the benefit of all our society. Our main objectives are improving the status of women in science in Africa and using astronomy to inspire more girls to do STEM (Science, Technology, Engineering, and Mathematics).

AfNWA was established in September 2020 as one of the committees under AfAS and publicly launched in January 2021. By now, we have more than 100 members under the Network from 30 different countries, where ~ 80% are women and ~ 20% are men. AfNWA objectives cannot be achieved without the full support and participation of the whole society, and therefore the participation of men is very welcome. More than 80% of AfNWA members are early-career researchers, MSc and PhD students. With AfNWA we want to bring support to all of these young women in science and make sure that they remain in science in the long term.

**Over the last 6 months, since the last published AfAS Newsletter, the following activities have been carried out under AfNWA:**

- 3rd virtual training has been organised for Network members on CV writing given by Dr. Carolina Odman (UWC, South Africa). (<https://afnwa.org/second-session-of-cv-training-workshop/>)



**How to write an excellent CV?**

AfNWA Training  
Prof. Carolina Odman  
IDIA, UWC

- The new AfNWA website has been developed and can be accessed at <https://afnwa.org/>.
- AfNWA was a part of the Science Summit under the UN 76th General Assembly. The vision of AfNWA was presented by our Board member Dr. Priscilla Muheki (MUST, Uganda) under the SDG 5: Gender Equality session 'Women in Science Policy Making will achieve the SDGs'.

- AfNWA and AfAS have been presented during the keynote speech given by Dr. Mirjana Pović (ESSTI/Ethiopia, IAA/Spain) at the Global Hands-On Universe (GHOU) 2021 conference.

<https://www.youtube.com/watch?v=YGlguNhgl4U>

AfNWA celebrated the Women in Space under the Space World Week together with Dr. Bonita de Swardt (SARAO, South Africa) who spoke about 'Growing a network of skilled professionals in astronomy - the story of the SKA South Africa'.

<https://afnwa.org/afnwa-world-space-week-women-in-space-talk-by-dr-bonita-de-swardt/>

**World Space Week** OCTOBER 4-10

## GROWING A NETWORK OF SKILLED PROFESSIONALS IN ASTRONOMY – THE STORY OF THE SKA SOUTH AFRICA

The South African Radio Astronomy Observatory (SARAO), formerly known as the Square Kilometre Array (SKA) South Africa project, established a human capacity development programme in 2015 to grow the science and engineering skills base on the African continent for the construction and hosting of the SKA telescope. The programme has supported over 1300 grants since its establishment with a focus on the promotion of young African talent. In this talk, I will give an overview of these programmes and how well they have supported women in astronomy and in related fields, in growing a local high-tech skills base in South Africa and broader Africa. I will also explore the types of mechanisms put in place that can lead to the overall success of women in these fields based on our lesson learnt. This talk promises many inspiring stories of young African women who are now making their mark as leaders, innovators and entrepreneurs through their journey of self-discovery with the SKA playing a significant role.

**ZOOM LINK:** <https://us02web.zoom.us/j/83596490288?pwd=dW12N2VqYk1SMldHU0JEUUVBxap6UT09>  
**MEETING ID: 835 9649 0288**  
**PASSCODE: 56916250**

**DR BONITA DE SWARDT** carried out her initial training in astronomy at Rutgers University in the US. She completed her PhD in 2009 working on science commissioning data of nearby dwarf galaxies observed with the 1.1m Southern African Large Telescope (SALT) in Sutherland, South Africa. After completion of her PhD, she continued her research of studying the properties of nearby dwarf systems using SALT and various infrared observing facilities, which formed part of her postdoctoral fellowship at the South African Astronomical Observatory (SAAO). Bonita has always been passionate about developing human capacity in astronomy in South Africa. Following her postdoc, she was employed by the Department of Science & Technology (DST) under the Astronomy Desk in 2012. At the time, the Astronomy Desk was tasked with providing strategic advice and input to the Minister of Science & Technology, Ms Naledi Pandor, to inform astronomy governance and policy decisions within the South African context. Bonita joined the SKA South Africa – now known as the South African Radio Astronomy Observatory (SARAO) – under its Human Capacity Development (HCD) division in 2014. She has developed and oversees a number of new strategic capacity development interventions that have been formally introduced into SARAO.

**AfNWA**  
 African Network of Women in Astronomy

**AfAS**  
 African Astronomical Society

In addition to previous, a small presentation about women in astronomy in Africa has been prepared by our board member Prof. Somaya Saad (NRIAG, Egypt). This presentation is under constant development for including more women working in Africa. (<https://afnwa.org/celebrating-world-space-week-oct-04-10-2021/>)

AfNWA in collaboration with the International Science Programme (ISP), Uppsala University, Sweden, opened in November a call for the 2021 Awards to recognise and support the scientific achievements and contributions to the society of women in Astronomy in Africa. Dr. Vanessa McBride (OAD, SAAO/UCT, South Africa) is a team leader of the AfNWA 2021 Awards. (<https://afnwa.org/women-in-astronomy-awards-2021/>)

AfNWA started a campaign within its network for developing outreach videos to be used across the continent for inspiring more girls to do STEM. There are also plans in collaboration with AfAS Outreach Committee to provide seed funding for the science outreach activities with girls to be carried out on the continent.

To get more information about AfNWA and to become a member please visit:  
<https://afnwa.org/> and/or <https://www.africanastronomicalsociety.org/afnwa/>.

Sincerely,  
**AfNWA team**

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# The Premiere of Sida Tsoatsoas

## An African Fulldome Short Story of Our Beginning

This December will see the exciting national premiere of the first digital planetarium film that celebrates African Indigenous Knowledge Systems and traditional folklore. Produced locally in South Africa, Sida Tsoatsoas is a 13-minute, high-resolution fulldome (360-degree) film that has been jointly funded by the Presidential Employment Stimulus Programme (an initiative of the National Arts Council), the African Planetarium Society, and the World-wide Indigenous Science Network. This bilingual film has been produced for screening on digital planetaria around the world, to celebrate our African heritage with a diverse global audience.

Sida Tsoatsoas combines both live-action and animation sequences to transport audiences to the iconic red dunes and expansive saltpans of the Kalahari in Southern Africa. Join us as we share in the unique storytelling techniques of the #Xhomi people who share insight into their culture. During this journey, we find out how the Sun gave the mischievous Jackal his ash-burnt markings on his back, imparting a valuable lesson to us about our connection to each other and the cosmos. Inside Tsoatsoas, we delve into the story of our beginnings through immersive insights into the lives of the #Xhomi, and along the way try to understand what we could lose if we do not take a moment to reflect on the global sense of Ubuntu (compassion and humanity): we are all

under one sky. Sida Tsoatsoas will initially premiere at various planetaria around South Africa, including the Iziko Planetarium and Digital Dome (Cape Town), Naval Hill Planetarium (Bloemfontein) and Sutherland Planetarium (Sutherland). One of the goals of this film is to share our cultural heritage with a wider and more diverse audience through using multiple languages. As such, the film is accessible to all ages and, as a global first, is narrated in the local #Xhomi variety of Afrikaans and Nama (with English subtitles). The film will also be made freely available via online channels for worldwide audiences to download where both local and international language translations will be encouraged for greater global accessibility and exposure.

To find out more about this film or other locally produced African full-dome films, contact Dr. Sally Macfarlane ([sallymac@gmail.com](mailto:sallymac@gmail.com)) or Dr. Daniel Cunnama ([daniel@sao.ac.za](mailto:daniel@sao.ac.za)).

To find out more about the important work being conducted by the company African Tongue to preserve endangered African languages, contact Dr. Kerry Jones ([africantongue@gmail.com](mailto:africantongue@gmail.com)).

***Dr. Sally Macfarlane, Dr. Daniel Cunnama,  
Dr. Kerry Jones***

# Sida Tsoatsoas

## OUR BEGINNING

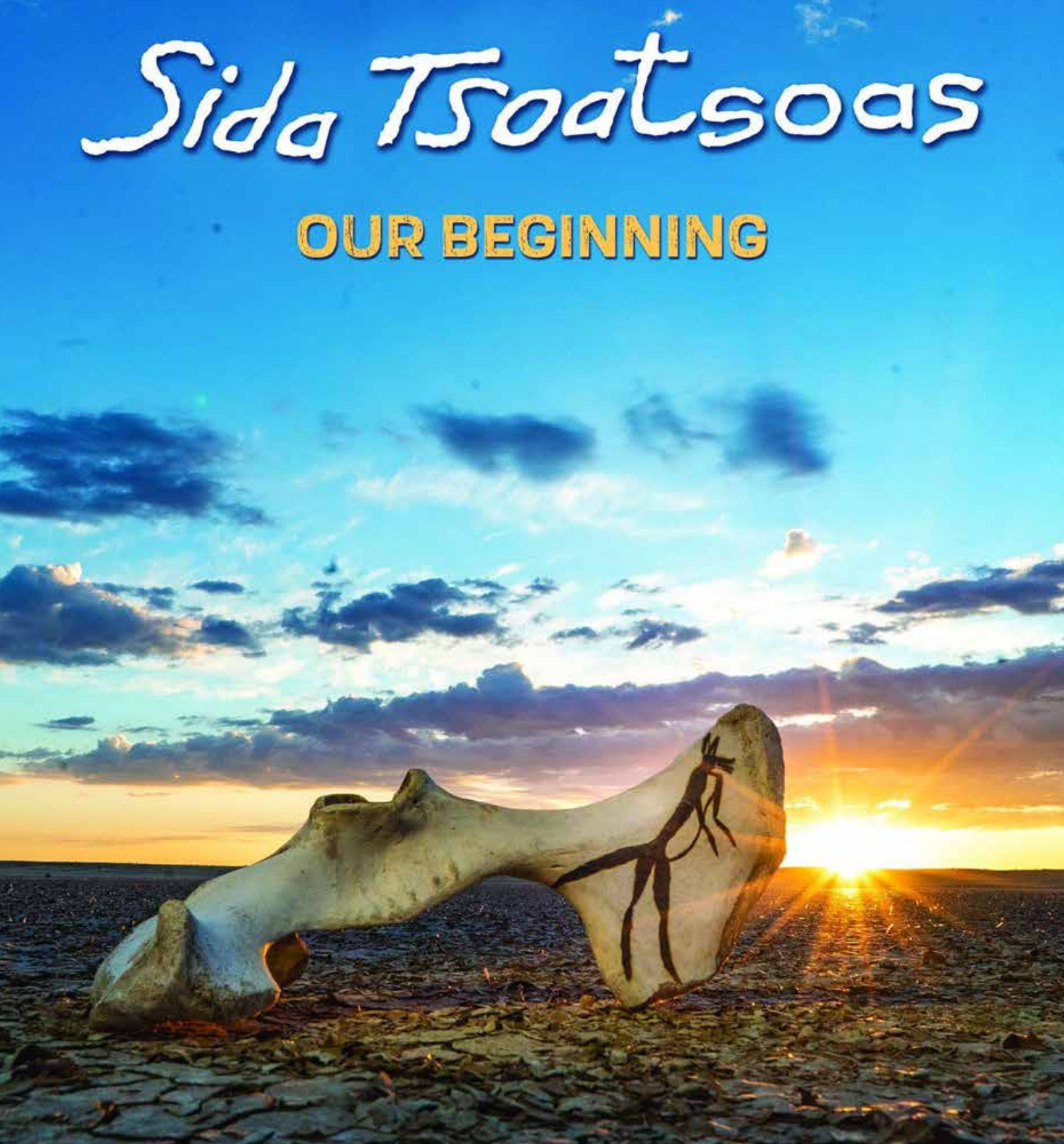


Figure 1: The Jackal And the Sun An African story A Kalahari story Under our shared sky  
A story of... Our Beginning

# The Forum on Astronomy in Africa

The Forum on Astronomy in Africa took place on Zoom from 27 to 29 October 2021 as a virtual meeting in preparation for the International Astronomical Union (IAU) General Assembly (GA) in 2024 for the first time on the African continent. Cape Town has been selected to host the meeting, and the National Research Foundation (NRF) of South Africa is the official host organisation. Other key organisations involved in the event include the African Astronomical Society (AfAS), the Academy of Science of South Africa (ASSA), the IAU Office of Astronomy for Development (IAU OAD), the South African Astronomical Observatory (SAAO), and others.

The main purpose of such a forum was to engage the African astronomy community and discuss how the continent can maximally benefit from the unique opportunity of hosting the IAU GA in 2024, as well as how best to facilitate participation by countries within the continent and obtain commitment on participation and identify country ambassadors. Contributions were made in the form of short recorded talks about ideas or initiatives related to the IAU GA 2024. During the forum, real-time proposals for discussion could be made in the “unconference” session. Participants included astronomers, amateur astronomers, and the astronomy education outreach community, anyone with an interest in astronomy research, infrastructure, education, outreach, development; amateur astronomy, astrotourism, astronomy arts & culture.

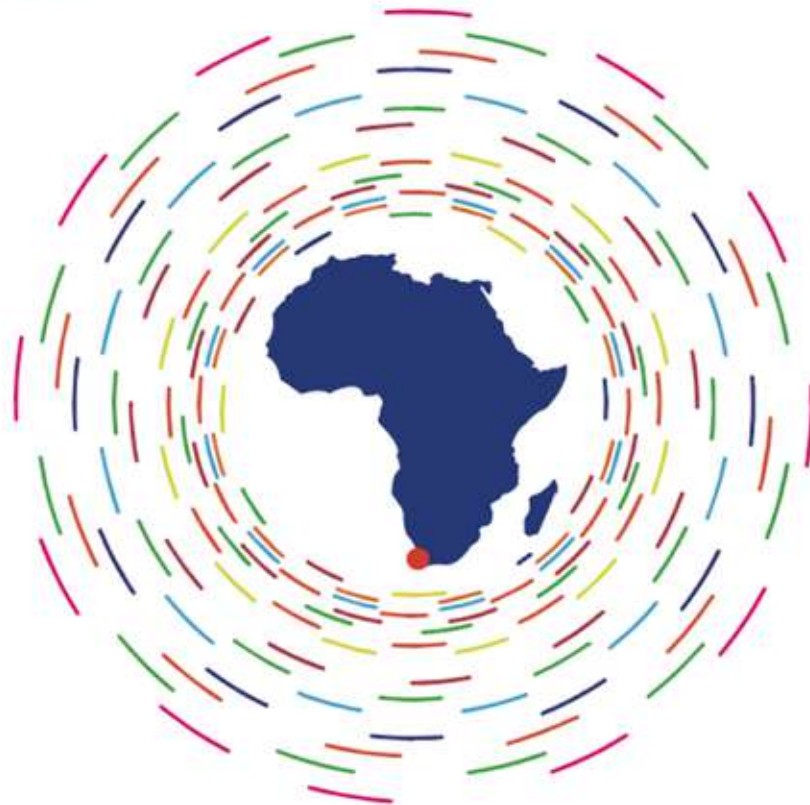
One of the important outcomes of the Forum was contributions from participants to update the [Vision document](#) that captures the spirit of unity in astronomy across Africa and to consolidate that spirit into a vision for 2024 and the legacy thereafter that we can strive towards as a united astronomical community. Participants were given an opportunity before, during, and after the forum, to add their comments and suggestions to the document. The document is now an open work in progress belonging to the African astronomy community, and most importantly, has specific actions listed which we can each take ownership of on the path towards 2024 and beyond. It is a working document that serves as both a brainstorming exercise and a planning document for the African astronomy community.

The event was recorded and broadcast live on YouTube to make it as accessible as possible (see link below): <http://www.africanastronomicalsociety.org/forum-on-astronomy-in-africa-and-the-iau-ga2024/>

***IAU GA 2024 National Organising Committee  
AfAS Secretariat***

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*Save the date!*



**XXXII IAU GENERAL ASSEMBLY**

5 - 16 AUGUST 2024  
CAPE TOWN, SOUTH AFRICA

[www.astronomy2024.org](http://www.astronomy2024.org)

# AfAS Annual Conference (AfAS-2022) - REGISTRATION NOW OPEN

The Executive Committee of the African Astronomical Society (AfAS), wishes to inform you that the AfAS Annual Conference and General Assembly will be held as a hybrid event from the 14th to 18th March 2022. The in-person meeting will take place at the South African Astronomical Observatory (SAAO) in Cape Town, South Africa. Should the COVID-19 regulations in the country prevailing during the conference dates preclude an in-person meeting, the event will revert to a fully digital format. We are assuming that the COVID-19 health protocols will be maintained in the country. Therefore the maximum number of in-person attendees that the venue can accommodate is 40 (forty) and the rest will join virtually.

The hybrid format will allow those who do not wish to travel, the opportunity of attending and/or presenting a talk by virtual means. This notice is a call for abstracts from those wanting to present a talk or poster at the conference in the following tracks:

- 1) Scientific**
- 2) Education, Development, and Outreach**

Interested persons must submit a brief abstract (Maximum 300 Words) on the presentation which the Scientific Organising Committee (SOC) will consider; the closing date for the submission of the abstracts is 10 January 2022. Presenters must indicate whether they wish to present in-person or virtually. AfAS is committed to a diverse representation of talks at all levels including student presentations on their research work. It is anticipated that the final programme will be published by the end of February 2022 with authors of successful abstract submission advised by mid-February 2022.

Registration for the 2022 AfAS Annual Conference and General Assembly is now open, at:  
<https://www.africanastronomicalsociety.org/afas2022-ga/>



# Call for Nominations to AfAS Executive Committee for the period 1st April 2022 – 31st March 2025

This notice is a call for nominations from the Astronomy Community of Africa for the election of Executive Committee Members for the three years commencing 1st April 2022. The nominations are for the following Officers of the Executive Committee:

- Seven (7) General Officers who will be elected at the General Assembly scheduled for March 2022. After the election of the 7 General Officers, the President and Vice President will then be elected from the 7 duly elected Officers.

An individual may therefore not nominate more than 7 persons; nominations must ensure that:

1. A nominee must be a full member of AfAS, however, non-members can be nominated provided an application for full membership is completed at the time of the nomination. A full member of AfAS satisfies the following criteria:
  - successfully completed a Masters' or Doctoral Degree in astronomy or a related field; or
  - successfully completed a Bachelors and/or Honours degree in astronomy or related field and has thereafter for at least five years been engaged in activities related to astronomy; or
  - have successfully presented proof of independent or co-authorship of accepted, refereed or published astronomy paper(s) to the membership committee of the African Astronomical Society.
2. All nominees must be based in Africa and affiliated to an African institution.

All nominations must be made on the nomination form which is available on the AfAS website (<https://www.afasociety.org/executive-committee-elections-2022/>) and all sections must be completed. For non-AfAS members who are nominated, the membership application form can be completed on-line on the AfAS website by the nominee. Note that all nominees must confirm their acceptance on the nomination form and provide a comprehensive CV. Failure to provide acceptance of nomination and/or a detailed CV will render the nomination invalid.

The nomination form must be completed before 31 January 2021. Voting by AfAS members will take place at the General Assembly in March 2022.

Charles Takalana  
(Head of Secretariat, AfAS)

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# Annual Conference and General Assembly of the African Astronomical Society 14-18 March 2022 (AfAS-2022GA)

**HYBRID MEETING  
REGISTRATION  
NOW OPEN**

[READ MORE](#)



**PHYSICAL VENUE:**  
South African  
Astronomical  
Observatory  
SAAO, Cape Town

(virtual platform available)

**AfAS**  
African Astronomical Society

science & innovation  
Department  
Science and Innovation  
REPUBLIC OF SOUTH AFRICA

science  
stars

AFRICAN  
PLANETARIUM

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XXXII IAU GENERAL ASSEMBLY  
CAPE TOWN, SOUTH AFRICA, 2022