



# IAU Catalyst | August 2023



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# 1 Executive Committee

## 1.1 Why be an IAU Member?

**Debra Elmegreen,**  
*IAU President*

The International Astronomical Union has evolved over its 100+ year history from an organisation of professional astronomers gathering to share their discoveries to one that also uses astronomy to impact the public in many ways. The IAU's emphasis on international cooperation makes it unique from other professional astronomy organisations.

National Members of the IAU (currently 85) are adhering organisations representing national scientific communities in their respective countries. Applicants are elected at our triennial General Assemblies. National Members pay dues and cast votes on the leadership, administration, budget, and business at each General Assembly.

Astronomers apply to join the IAU as Individual or Junior Members. National Members review and recommend their applications to the Membership Committee, and the Executive Committee admits them (the National Members elect both committees). We now have 12,000 Individual Members and just surpassed 1000 Junior Members (a category started in 2018). Individual and Junior Members can propose and vote on scientific resolutions at General Assemblies, propose and lead Symposia, and serve on various Divisions, Commissions, and Working Groups. They pay no dues to the IAU.

Do you want to help set the standards of measurement in your field? Are you concerned about dark skies disappearing? Do you want to give lectures to broad audiences? How about working on diversity and equity in our field? Do you want to discuss global coordinated survey follow-ups? Are there new goals you would like the IAU to pursue? All of these are options within our many branches. Members carry on the activities of the IAU through our four Offices (Outreach, Development, Education, and Young Astronomers), our Center for the Protection of the Dark and Quiet Sky from Satellite Constellation Interference, nine scientific Divisions, 38 Commissions, and 47 Working Groups (new ones can be proposed by Individual Members). All members join at least one Division and may join Commissions and Working

Groups as desired. Working Groups focus on particular areas and typically continue for a triennium or two to accomplish a specific goal.

I urge you to apply for membership. Applications are open each fall till December 15<sup>th</sup>. If you're already a member, please consider becoming more engaged in the areas that appeal to you. We hope you can be a part of our vibrant Cape Town community for the XXXII<sup>nd</sup> General Assembly (August 2024), the first to be held in Africa, as we join under our shared sky.



*Figure 1: Participants in the XXXI IAU General Assembly attend an event to celebrate the opening of the Center for the Protection of the Dark and Quiet Sky from Satellite Constellation Interference. This assembly was held from 2-11 August 2022 in Busan, Korea, and had the theme "Astronomy for all". Credit: IAU/GA2022 NOC*

# 1 Executive Committee

## 1.2 IAU Resolutions

**Laura Ferrarese**  
*IAU Vice President*

**Claus Leitherer**  
*Chair of the IAU  
Resolution Committee*

Every three years, in concomitance with the IAU General Assembly (GA), the IAU membership has the opportunity to make recommendations on scientific, administrative and/or financial matters that have a broad and significant impact on the Union and the astronomical community as a whole.

All Resolutions approved during IAU's 101-year history can be found on the IAU website<sup>[1]</sup>. As one might expect, the vast majority are scientific (for instance, Resolution 2021/B3 "On the Gaia Celestial Reference Frame" and, yes, Pluto!). Still, a few affect the organisation and administration of the Union (for instance, Resolution 2012/B4 " On Restructuring the IAU Divisions"). With the XXXII GA, in one year, the membership is once again invited to seize this opportunity and propose actions that will affect not just their Union but their entire discipline. Here's how:

A Resolution must be submitted to the IAU General Secretary (IAU-general.secretary@iap.fr) by a National Member, a Division, a Commission, a Working Group, or the IAU Executive Committee (EC) no later than February 1st, 2024 (or November 1st, 2023 if the resolution affects the IAU budget). The length can vary from resolution to resolution, but the format should follow general guidelines<sup>[2]</sup> and include specific actions to address the issue under consideration<sup>[3]</sup>.

Shortly after the deadline, the entire membership can begin familiarising themselves with the proposed resolutions, all of which will be posted on the IAU website. Meanwhile, the IAU Division Presidents, the IAU EC, and a specially appointed Resolution Committee<sup>[4]</sup> will review all Resolutions; contact, if necessary, the proposers to clarify language or content; and draft comments and recommendations.

At this point, we will all have to wait patiently until the GA. During a plenary session, the Resolution Committee will present each Resolution as well as the Committee's and the EC's recommendations for their adoption or rejection. After allowing the proposers to promote their cause, the discussion

will be opened to the entire audience. Finally, the membership will be invited to vote (electronic voting after the GA might also be an option) on whether to adopt or reject each proposed resolution, and history will be made!

On behalf of the IAU Executive Committee and the Resolution Committee, we look forward to your input and a lively discussion in Cape Town.

### NOTES & REFERENCES

- [1] List of Approved Resolutions [here](#).
- [2] Resolutions Guidelines [here](#).
- [3] Detailed Instructions [here](#).
- [4] Membership of the IAU Resolution Committee [here](#).



*Figure 1: IAU 2006 General Assembly: Result of the IAU Resolution Votes. Credit: IAU/ Robert Hurt (SSC)*

## 2.1

Description of IAU  
Junior Members  
Executive Committee  
Working Group  
Activities During  
2022-2023**Camilo Delgado-Correal  
& Hannah Stacey,***Co-chairs of the Organising  
Committee (OC)***Anupam Bhardwaj,  
Hongwei Ge, Brianna  
Smart, Sabine Thater,  
Jeremy Tregloan-  
Reed, Stefan Wallner  
& Mustafa K. Yildiz***Organising  
Committee (OC)*

The Working Group (WG) of IAU Junior Members (JMs) focuses on topics crucial to early career astronomers across the globe. This includes careers, teaching, mobility, well-being, financial security, transparency and diversity. JMs represent the majority of active astronomers worldwide, representing the future of the field, but also provide an invaluable influx of skilled workers to all branches of society.

The Organising Committee (OC) meets approximately every two months and has ongoing communication via the OC Slack space. From August 2021 to June 2023, we had 12 meetings. We have various social media channels to facilitate communication with our members and other Early Career Researchers (ECRs). Communication is central to keeping our community active and engaged. Here we present a summary of these channels:

- Slack space: 347 members
- Twitter: 267 followers.  
<https://twitter.com/IAUJuniorMember>
- Instagram: 93 followers  
<https://www.instagram.com/IAUJuniorMember>
- YouTube: 309 subscribers, 100–500 views per video  
[https://www.youtube.com/channel/UCZQsB5LY2Tv\\_tj9ddVdnPuw](https://www.youtube.com/channel/UCZQsB5LY2Tv_tj9ddVdnPuw)
- Facebook: 180 followers  
<https://www.facebook.com/IAUJuniorMember>

In August 2022, the WG had four sessions at the XXXI IAU General Assembly in Busan, Korea. With topics and speakers of the sessions are as follows<sup>[1]</sup>:

- IAU Outreach: Building Bridges Through Communication and International Cooperation & Public Communications Advice for Young Scientists: Lina Canas (IAU OAO), Matipon Tangmatitham (NARIT), Lars Lindberg Christensen (NoirLab).
- Writing Grant Proposals: Your Road to Success & Writing Grant and Observing Proposals: Sharing my ESO and ERC Experience: Richard de Grijs (MPIA), Vincenzo Mainieri (ESO).
- Scientific Writing for Astronomers: Choice of Journal, Submission Process, & Writing Guide Scientific Writing for Astronomers: From Thinking to Paper Outline: Ethan Vishniac (Editor in Chief AAS Journals), Johan Knapen (IAC), Nushkia Chamba (The Oscar Klein)

Networking/Discussion Meeting for Junior Members/Early-Career Researchers: JMs.

During our sessions, the writing sessions surpassed the outreach ones in terms of participation, and overall, the conversations and talks were quite interesting, providing useful information, especially to our core audience: young astronomers.

We continue our "Discourse Series" of talks aimed at Early Careers Astronomers (ECAs), where these talks cover topics including careers inside and outside astronomy, science highlights, public engagement, and professional development. A good example of this series is given by the talk by Dr Vanessa Moss (CSIRO) on the topic "Beyond Academia: Observatory-focused Career Pathways in Astronomy"[2]. Our virtual talks are usually given in "traditional" virtual formats (e.g. using the platform Zoom) but do not necessarily draw optimal interaction and engagement from the audience. We collaborated with "The Future of Meetings" initiative to host the meeting within AltSpaceVR2: a platform that simulates realistic interactions to allow participants worldwide to interact in a more meaningful way (the event was live-streamed on YouTube for those who could not access AltSpaceVR).

## NOTES &amp; REFERENCES

[1] Website: [https://www.iauga2022.org/program/program\\_06\\_7.asp?sMenu=abo6](https://www.iauga2022.org/program/program_06_7.asp?sMenu=abo6)

[2] IAU ECA Online Discourse #17 - "Beyond academia: observatory-focused career pathways in astronomy":  
<https://www.youtube.com/watch?v=Qf8lu918pBA>

# 2

## IAU Divisions, Commissions & Working Groups

### 2.2 Highlights on Astronomy Education and Development of the IAU Commission C1

**Boonrucksar  
Soonthornthum,**  
*President of  
Commission C1*

**Urban Eriksson,**  
*Vice-president of  
Commission C1*

**Tomita Akihiko and  
Saeed Salimpour,**  
*Commission C1*

Equitable and assessable education is vital for the supporting, enabling and developing skills needed to ensure our species flourishes, and it is one of the United Nation's Sustainable Development Goals (SDGs).

The wonder of the night sky has inspired generations and provides context to discuss some of the fundamental questions about the Universe. Although astronomy is not a subject in many curricula, astronomy topics are present in numerous curricula worldwide. Therefore, for educators, astronomy provides a context to promote student imagination, develop skills and an appreciation for the nature of science, and, most importantly, connect knowledge and skills from various disciplines. This is important in the disrupted world that requires interdisciplinary knowledge and skills to overcome humanity's challenges. Astronomy education becomes an essential platform for national and international sectors to give everyone a cosmic perspective.

The International Astronomical Union (IAU) has realised the importance of astronomy for education through international collaboration among the IAU member countries and strives to make astronomy accessible and inclusive for everyone. Within the IAU, C1 is a Commission under Division C (Education, Outreach and Heritage). In 2016, the Commission C1 committee revised its scientific objectives to further develop astronomy education, which includes more public involvement and enhancing the role of IAU members (both the commission and inter-commission collaboration) on several projects in promoting astronomy for education.

Since 2022, two working groups have been established under Commission C1:

- Astronomy Competition for Secondary School Students;
- Astronomy Education Research & Methods.

Commission C1 has cooperated with other IAU Commissions in order to integrate Astronomy Education with other related disciplines and enhance the role of Astronomy Education in teaching and learning:

- Inter-Commission C1-C2-C3-C4 WG: Astronomy in Culture (WGAC)
- Inter-Commission C1-F2-F3-H2 WG: Education and Training in Astrobiology

- Inter-Commission C1-C3-C4 WG: Ethnoastronomy and Intangible Astronomical Heritage

These working groups have been actively involved in numerous initiatives on behalf of the Commission. These activities include astronomy competitions for secondary school students (Figure 1), Astronomy Day in Schools (ADiS) (Figure 2), the publication of the Astronomy Education Journal (AEJ) and the organisation of the AstroEdu Conference and others.

To fulfil the mission of the IAU to promote and enhance astronomy in all its aspects, Commission C1 will continue and try to develop more activities and collaboration with the various offices and Commissions within the IAU. Commission C1 will also be an essential platform of the IAU which would enhance the role of professional astronomers to reach the IAU strategies on astronomy education and disseminate astronomy education for human capacity buildings and a better understanding worldwide.



Figure 1: The 15th International Olympiad on Astronomy and Astrophysics (15th IOAA) held at Kutaisi, Georgia. Credit: Commission C1



Figure 2: The Astronomy Days in Schools, is organised by the sub-WG of Astronomy Days in Schools under the WG of Astronomy Education Research & Methods. Credit: Commission C1

## 3.1 Overview of the IAU Regional Meetings in 2023

**José Miguel,**  
*IAU General Secretary*

The program of scientific meetings is one of the most important means by which the IAU pursues its goal of promoting the science of astronomy through international collaboration. A large fraction of the Union's budget is devoted to the support of the IAU scientific meetings<sup>[1]</sup>.

Due to the pandemic and for the past few years, our previously planned regional gatherings have been suspended. In 2023, the IAU resumed its Regional Meetings, mostly in hybrid mode. In February, we hosted the Sixth Middle-East and Africa Regional IAU Meeting<sup>[2]</sup> (MEARIM 2023) in Cairo, Egypt and online. Expertly led by Prof. Makram Ibrahim, the Chairperson of the Local Organising Committee, the participants were supported by a large and professional local team. The first of these meetings occurring in hybrid mode, although smaller attendance numbers than previous meetings, MEARIM 2023 brought together nearly one hundred astronomers, observational, theoretical astrophysicists and space scientists with a packed program with a wide range of topics from exoplanets to cosmology and also instrumentation, and prominent speakers.

In August, Koriyama, Japan, is hosting Asia-Pacific Regional IAU Meeting (APRIM 2023)<sup>[3]</sup>, having a record number of grant applications with over 200 requests. The program counts on the presence of plenary speakers such as V. Martinez-Pillet, Director of the National Solar Observatory in the US, Masahiro Takada, from the Kavli Institute of the University of Tokyo and Natasha Hurley-Walker from the Curtin Institute of the International Centre for Radio Astronomy Research.

Finally, the third and last IAU Regional Meeting of 2023 will be celebrated in Uruguay, gathering the Latin-American astronomy community. The Latin American Regional IAU Meeting (LARIM 2023)<sup>[4]</sup> will be the seventeenth edition. During the week of 27<sup>th</sup> November to 1<sup>st</sup> December, several astronomical activities and events will take place in Montevideo, including the III Workshop on Astronomy Beyond the Common Senses for Accessibility and Inclusion. The

Scientific Program will include Plenary Review Talks from Yara Jaffe, Universidad Técnica Federico Santa María (Chile); Karín Menéndez-DelMestre, Observatorio do Valongo (Brazil), Luis A. Núñez, Universidad Industrial de Santander (Colombia) among others.

The IAU Regional Meetings are core milestones for the IAU and encourage the interaction and collaboration between countries focusing on a common perspective cementing the collaboration for the advancement of research in astronomy and the implementation of the IAU mission.

### NOTES & REFERENCES

- [1] IAU Scientific Meetings: <https://www.iau.org/science/meetings/>
- [2] MEARIM 2023 Official Website: <https://mearim6.nriag.sci.eg/>
- [3] APRIM 2023 Official Website: <https://aprim2023.org/>
- [4] LARIM 2023 Official Website: <https://mearim6.nriag.sci.eg/>



*Figure 1: An image depicting the main venue is shown. Credit: APRIM 2023 LOC*

## 3.2 Africa Prepares to Host IAU General Assembly 2024 with Exciting Scientific Symposia

**Vanessa McBride,**  
*Deputy Director of the IAU Office of Astronomy for Development (OAD)*

The spotlight is turning towards Africa as South Africa, specifically Cape Town, prepares to host the next International Astronomical Union (IAU) General Assembly (GA) in 2024. Cape Town is renowned for its natural beauty, including picturesque beaches, majestic mountains, and the stunning Kirstenbosch botanical gardens.

The GA 2024 event, being the first IAU General Assembly on the African continent, holds much more significance than a mere gathering of astronomers. It embodies the aspirations of the African astronomy community and presents a unique opportunity to reshape the world's perception of Africa. This audacious vision is encapsulated in Vision2024, which can be explored on the conference website<sup>[1]</sup>.

The scientific symposia and focus meetings scheduled<sup>[2]</sup> for the IAU GA 2024 encompass a diverse range of topics, promising enriching discussions and groundbreaking discoveries. Furthermore, there will be discussions on various other topics, including the history of astronomy in South Africa, the interface between computational astrophysics and big data, multi-wavelength astrometry, and the teaching capacity of remote observing facilities for universities and high schools.

Beyond the scientific program, attendees can anticipate a host of engaging activities and experiences. Technical tours will offer a firsthand glimpse into Africa's cutting-edge astronomy



*Figure 1: MeerKAT radio telescope, Carnarvon, South Africa. Credit: SARAO*

facilities, while touristic expeditions will allow participants to explore the natural wonders and historical landmarks of Cape Town. Entertainment and social events will create a celebratory atmosphere, showcasing Africa's vibrant culture through music, dance, and cultural performances. Additionally, the event will provide valuable outreach opportunities to engage with the local community and inspire the next generation of astronomers.

The Cape Town International Convention Centre has been booked. The entertainment is being selected, and the scientific programme is taking shape. Africa stands poised to deliver an unforgettable experience that will leave a lasting impact on the field of astronomy!

### NOTES & REFERENCES

- [1] Vision2024: <https://astronomy2024.org/vision-2024/>
- [2] IAU Scientific Meetings for 2024 Announced: <https://www.iau.org/news/announcements/detail/ann23018/>



*Figure 2: Dancers and musicians perform at an entertainment venue in Cape Town. Credit: Charles Takalana*



# 4 Science Focus

## 4.1

### IAU Symposium 376: At the Crossroads of Astrophysics and Cosmology: Period– luminosity Relations in the 2020s

**Richard de Grijs**

*Scientific Organising  
Committee Co-Chair*

**László Kiss**

*Scientific Organising  
Committee Co-Chair*

**Róbert Szabó**

*Local Organising  
Committee Co-Chair*

The period–luminosity relation (PLR) is an important relationship between the fundamental physical properties of a diversity of variable stars. IAU Symposium 376 aimed to discuss recent results from detailed studies of the key PLR characteristics, including its shape, calibration and dependence on stellar parameters, and chemical abundances. This topic is timely, given the wealth of data recently obtained using state-of-the-art ground- and space-based facilities, high-impact *Gaia* data releases, the initial operations of the James Webb Space Telescope (*JWST*) and the next-generation ground- and space-based observatories.

We framed the conference by focusing on the discrepancy in the Hubble constant resulting from different approaches. The *JWST* will soon become a game-changer. Even at this early time, we are seeing significant improvements in spatial resolution to that offered by the *Hubble Space Telescope* at similar wavelengths. Preliminary results imply that the scatter in the “standard” Cepheid PLR at  $1.5 \mu\text{m}$  may be reduced by a factor of 2–3. Many inspirational talks highlighted the phenomenal distance accuracy currently achievable with Cepheid PLRs. The importance of *Gaia* for studies of variable stars cannot be overstated: *Gaia* cluster Cepheids show Large Magellanic Cloud-like scatter in their PLRs, while the distance to M33 has now been established to better than 1.3%.

Current developments promise exciting opportunities to determine the stellar mass–luminosity relation better. Even more importantly, we are now reaching observational regimes where we can get a good handle on metallicity effects. In future developments, increasing data volumes will fundamentally change our approaches, and this will only be accelerated when facilities such as the Vera C. Rubin Observatory and its Legacy Survey of Space and Time come online. Spectroscopic time-series observations clearly are the future. Beyond the optical and near-infrared domains, X-ray variability, ultraviolet and radio approaches are increasingly hitting the forefront of the field, so we are warned to keep an

eye out for new developments in those areas and an open mind as regards one’s favourite wavelength range.



Figure 1: Welcome session.  
Credit: The Author



Figure 2: Group photo for the  
IAUS 376. Credit: The Author

# 4 Science Focus

## 4.2

### IAU Symposium 380: “Cosmic Masers: Proper Motion toward the Next-Generation Large Projects” Highlights

**Tomoya Hirota,**  
*Scientific Organising  
Committee Co-Chair*

The IAU Symposium 380, “Cosmic Masers: Proper Motion toward the Next-Generation Large Projects” (IAUS 380), was held from March 20 (Mon) to 24 (Fri) 2023 at Kagoshima, Japan, in hybrid mode. Cosmic masers have been employed as unique probes of various astronomical objects and environments, ranging from newly born stars and evolved stars, the interstellar medium (ISM) to active galactic nuclei (AGN). The maser scientific community is diverse and multidisciplinary but has long been tied together through the common background of physics and observational techniques. To connect and build new collaborations, international meetings focusing on masers have been organized regularly since 1992 in the US, including the past IAU symposia 206 in Brazil (2001), 242 in Australia (2007), 287 in South Africa (2012), and 336 in Italy (2017). The IAUS 380 is the 6th big international maser conference and the first one in Asia. This 2023 symposium had a total number of registered participants was 172, of which 102 participated in-person and 70 online, working in 28 countries. There were

8 review talks, 19 invited talks, 37 contributed talks, and 55 poster presentations, including poster flash talks.

In the science sessions, seven major topics on maser research were discussed, such as cosmology, galaxies, Milky Way Galaxy, star-formation, evolved stars, maser theory, and future projects. It should be noted that time-domain studies from daily to decade-long monitoring of maser sources were reported with various telescopes from many different research teams in all regions of the world. Furthermore, multi-wavelength studies on maser sources have proliferated in the last decade, involving strong synergies with large facilities such as ALMA, JVLA, Gaia and various VLBI networks. As expressed in the sub-title, there were intensive discussion sessions for ongoing and future projects related to most of maser science topics. Taking the opportunity of the IAUS 380, scientific discussion and preparatory studies for future projects such as global and new regional VLBI networks, SKA, and ngVLA are expected to be developed.



Figure 1: Group photo for the IAUS 380. Credit: The Author

# 4 Science Focus

## 4.3

### IAU Symposium 378: “Black Hole Winds at All Scales” Summary of the Scientific Highlights

**Ehud Behar,**

*Scientific Organising  
Committee Co-Chair*

**Gabriele Bruni,**

*Scientific Organising  
Committee Co-Chair*

The symposium convened 70 astrophysicists, both experts and students, to discuss the latest findings on winds from black hole sources. We spent five full days at the Technion campus in Haifa. The exciting and popular topic brought together observers of many different wavebands, which made for a multitude of new data being presented and discussed. There was a good mix of low-energy and high-energy observations, including ground facilities and space observatories. Theoretical aspects of black hole outflows were also a big part of the discussions, and perhaps as expected, many puzzles about these winds remain.

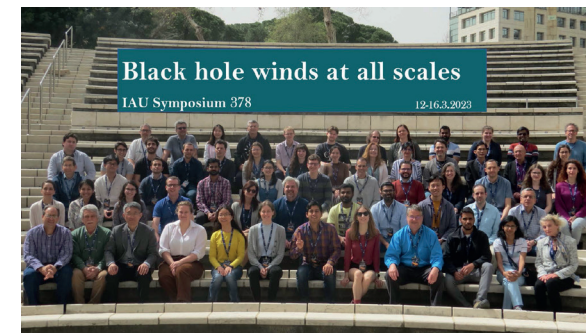
In terms of new observations, IR astronomers presented JWST data indicating significant galactic feedback at redshifts above  $z=6$ . New insights into the central sub-pc regions of active galaxies from GRAVITY were presented. In the mm-band, rich ALMA spectra covering a broad band provided new evidence that even the most obscured sources may host an accretion disk and produce outflows. Several new VLBA observations showed that even the radio quiet quasars host a

compact, optically thick radio source at their core, while some of them also feature extended optically thin emission that can be associated with an outflow. In the UV with Hubble, broad absorption line systems allowed for quantitative estimates of mass outflow rates indicating that massive outflows in the most luminous quasars carry appreciable mass and energy out to kpc scales in the galaxy.

On the theoretical ground, a variety of simulations for magnetic and thermally driven winds were presented, some of which attempted to put galactic and stellar black hole winds on an equal footing. Cases from extreme mass accretion rates to advection dominated flows were covered. Topics of radiative driving and radiative transfer in outflows were discussed, a few of which even proposed comparisons with observations.



*Figure 1: Guided tour of the old city of Akko. We learned about the different religions and regimes that ruled the city and the region over the past 2000 years. Credit: The Authors*



*Figure 2: Conference photo taken in the Technion's amphitheater. Credit: The Authors*

# 5 IAU Offices

## 5.1 IAU Selects Names for 20 Exoplanetary Systems

**Lina Canas**

*IAU Office for Astronomy  
Outreach*

**Suzana Filipeki Martins**

*IAU Office for Astronomy  
Outreach*

**Gonzalo Tancredi**

*Chair of the Executive  
Committee WG Exoplanetary  
System Nomenclature*

**Eric E. Mamajek**

*Chair of NameExoWorlds  
2022 Campaign*

The International Astronomical Union's NameExoWorlds 2022 contest has selected 20 pairs of names for exoplanets and their host stars. The contest was organised within the framework of the celebrations of the 10<sup>th</sup> anniversary of the IAU Office for Astronomy Outreach (OAO). With 603 entries from 91 countries, the campaign attracted over 8800 individuals working in teams, who put forward outreach initiatives that stimulated the direct participation of almost 12 million people worldwide.

The NameExoWorlds 2022 contest was set up to recognise and honour the efforts of the people who have been making it their life's work to popularise astronomy in an accessible and public-friendly way to their communities. The contest was open to anyone to form a team, implement an astronomy outreach event and propose a name for one of the 20 exoplanetary systems, each with one known exoplanet and its host star. The star and planet names were to be connected by a common theme, allowing other planets, if discovered in future, to be named following the same theme. These 20 systems were selected as they were among the first exoplanetary systems targeted for observations by JWST<sup>[1]</sup>.

The contest attracted over 8800 professional and amateur astronomers, students and teachers, and astronomy enthusiasts in teams that hosted astronomy events. From intimate events for neighbours to large online lectures, the astronomy outreach events created for NameExoWorlds 2022 showcased the diversity and creativity that is possible in astronomy outreach practices. For example, students from the JaHo School in Taipei created a participatory game that helped the public engage with the JWST, while students at Chittagong International School in Bangladesh created a gender-inclusive, week-long festival that included exhibitions, Q&A sessions, and film screenings.

Through the NameExoWorlds initiatives, the IAU recognises the importance of the connections between the sky and our diverse cultures. In recognition of this link and of the UN

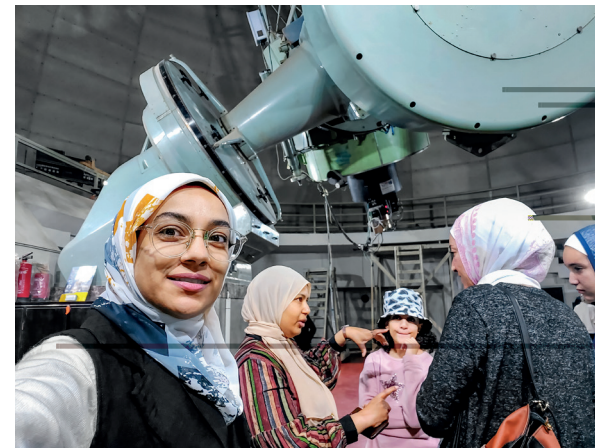
International Year of Indigenous Languages 2019<sup>[2]</sup>, speakers of Indigenous languages were encouraged to propose names from those languages. Seven of the selected names are of Indigenous etymology.

The full list of selected names can be found on NameExoWorlds website<sup>[3]</sup>.

*(Article originally published in the [IAU Press Release 7 June 2023](#))*

### NOTES & REFERENCES

- [1] JWST Website: <https://webb.nasa.gov/>
- [2] UN International Year of Indigenous Languages 2019: <https://en.iyil2019.org/>
- [3] NameExoWorlds 2022 selected names: <https://www.nameexoworlds.iau.org/2022approved-names>



*Figure 1: Students join the Kottamai Observatory staff for two open days organised in the context of NameExoWorlds 2022 on 18 and 19 November 2022, in Cairo, Egypt. Credit: National Research Institute of Astronomy and Geophysics/ Photographer: Eman Fathy Noureddin Mohamed*

# 6

## Cooperation with other Unions and Organisations

### 6.1

#### Kavli Prize Recognises Achievements in Astrophysics

##### Kathie Bailey

Director of Kavli Prize, The  
Kavli Foundation

The Kavli Prize is awarded biennially in astrophysics, nanoscience, and neuroscience. To Fred Kavli, founder of The Kavli Foundation and The Kavli Prize, these areas represented *"the big, the small, and the complex."* The Kavli Prize consists of USD \$1,000,000 in each category and a gold medal.

The prize is a partnership between The Kavli Foundation, the Norwegian Academy of Sciences and Letters, and the Norwegian Ministry for Education and Research. Kavli Prize Laureates are celebrated in Oslo, Norway, in a ceremony presided over by the Royal Family.

Since its first ceremony in 2008, 65 scientists have been honoured from 19 countries. In astrophysics, 19 individuals<sup>[1]</sup> have received the prize for outstanding achievement in advancing our knowledge and understanding of the origin, evolution and properties of the universe, including the fields of cosmology, astrophysics, astronomy, planetary

science, solar physics, space science, astrobiology, astronomical and astrophysical instrumentation, and particle astrophysics.

The nomination period for the 2024 Kavli Prize opened on July 1, and will remain open until October 1. Information and nomination links are available on the Kavli prize website<sup>[2]</sup>.

Andrea Ghez, a former member of The Kavli Prize Selection Committee for Astrophysics, has explained why it is important to nominate individuals for this and other prizes: *"It is especially important to nominate when you know of somebody who is doing new and interesting work. You have a much better understanding of why that contribution is interesting and important. I think the danger is that the people who are well known are the people who get nominated and that the new emerging work will be ignored."*

The Kavli Prize partners encourage all IAU members to nominate. The new laureates will be announced in June 2024.

#### NOTES & REFERENCES

- [1] Kavli Prize Astrophysics: <https://www.kavliprize.org/category/astrophysics>
- [2] Kavli Prize Website: <https://www.kavliprize.org>



Figure 1: The Kavli Prize Medal.  
Credit: The Kavli Foundation

# 7 IAU Timeline: Dates and Deadlines

## 7.1 IAU Dates and Deadlines September – December 2023

### September 1<sup>st</sup>

Abstracts and Grant Submission Open for the General Assembly - Submitters are automatically pre-registered at the early-bird fee

### September 15<sup>th</sup>

DEADLINE for Letters of Intent (LOI) for 2025 Symposia

National Members are Invited to submit candidatures for Honorary Members

### October 7<sup>th</sup>

IAU Membership Application Process Opens

### November 1<sup>st</sup>

DEADLINE for Letters of Intent to Host the IAU General Assembly in 2030 to Reach the General Secretary

### November 15<sup>th</sup>

DEADLINE for Submissions of Motions to Amend the Statutes and Bye-Laws to be Submitted to the General Secretary

DEADLINE for Submission of Resolutions with Financial Implications

### December 1<sup>st</sup>

DEADLINE for Submission of Full Proposals for 2025 Symposia

### December 15<sup>th</sup>

DEADLINE for Nominations for the Gruber Foundation Cosmology Prize

DEADLINE for PhD Prize Application Submission

DEADLINE for applications for Individual and Junior Membership.

### December 16<sup>th</sup>

Opening for Nominations for the Gruber Foundation Cosmology Prize for Next Year

Upcoming IAU Meetings are listed online [here](#).

# 8 IAU Publications

## 8.1 IAU Publications February 2023 – August 2023

The IAU publishes scientific results and information in all areas of astronomy. IAU Publications comprise primarily the Information Bulletin and the Proceedings of the IAU General Assemblies and other scientific meetings sponsored by the IAU.

Here we present Catalyst readers with a summary of the recent publications and updates.

For further information regarding the full documents please go to the IAU official website IAU.org [here](#).

### SYMPOSIA PROCEEDINGS

The IAU published 6 new symposia proceedings.  
Find them online [here](#).

### WORKING GROUP REPORTS

The IAU published 30 new Working Group Reports.  
Find it online [here](#).

### COMMISSION REPORTS

The IAU published 29 new Commission Reports.  
Find them online [here](#).

### DIVISION REPORTS

The IAU published 9 new IAU Division Reports.  
Find them online [here](#).

### SMALL BODIES NOMENCLATURE BULLETINS

The IAU published 8 new IAU Working Group Small Bodies Nomenclature Bulletins.  
Find them online [here](#).

### NEWSLETTERS

The IAU published 4 new IAU Newsletters.  
Find them online [here](#).

### OFFICES PUBLICATIONS


The IAU published 1 new IAU Office.  
Find them online [here](#).

### BOOKS

The IAU published 1 new IAU Book.  
Find them online [here](#).

### BROCHURES

The IAU published one new IAU Brochure  
Find them online [here](#).



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*Cover: Participants during a stargazing night organised by Sahabat Langit Utara (SALUT) - Friends of Northern Sky in the context of NameExoWorlds 2022. The event took place at Kem Al-fariq, Yan, Kedah, Malaysia, on 23 October 2022.*

*Credit: Sahabat Langit Utara (SALUT)/Safuan Salahudin*

