



April 2023 Issue 17

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## Message from the Editors

In this issue of COSPAR News you'll hear about the recent UN-COSPAR Symposium on climate action (COSPAR resources and activities linked to the United Nations can be found [here](#)), you'll get a peek at the new-look online version of *Space Research Today*, and find information about recent special issues from one of our scientific journals, *Advances in Space Research*.

As you'll also see, our Capacity Building Workshops (CBW) are now up and running at pre-Covid levels. These are great for acquiring essential tools for your career, as well as expanding your professional network. Nicole Jimeno, a participant in the recent Data Analysis for Planetary Sciences workshop in Antofagasta, Chile, says, "It was my first experience working with real data from planetary missions and supported by experts, this opportunity really helped me to open my eyes in this world and to encourage me to become Bolivia's first planetary geologist." Nicole, we wish you every success! Don't forget that once you've taken part in our CBW, you can apply for the COSPAR Fellowship Program (more on that below).

Also in this issue you'll find reminders about upcoming COSPAR events and our pick of news items "On the Radar" in our space community, and Opportunities.

- [Space Science Highlights from the Past](#)

We hope you enjoy reading this issue. Don't forget to [let us know](#) if there's something you'd like to see or read here.

**Leigh Fergus and Richard Harrison**

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## 1. COSPAR-UN Symposium

As part of the Committee on the Peaceful Uses of Outer Space, Scientific and Technical Subcommittee, 60th session, COSPAR organised a Symposium on Space-Observation Contributions Supporting Climate Action in Vienna, Austria, on 14 February 2023, attracting over 100 delegates, in-person and remotely. The Symposium was webcast by the UN. The COSPAR President Pascale Ehrenfreund concluded by recalling that space can contribute directly and indirectly to all the 17 Sustainable Development Goals of the UN, through measurements of sea ice loss, sea level rise, monitoring of rivers to inform water management, monitoring of climate-induced hazards, monitoring of wildland fire and smoke emissions and transport (with a bearing on public health), and atmospheric observations. The full webcast is available for one year on UN WebTV, starting at 31:00 in this video: <https://lnkd.in/eYVBernb> Read the report on the Symposium in the next issue of *Space Research Today* and [see here](#) other UN-related activities that COSPAR is involved in.



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## 2. Trio of Merging Galaxies

This image from the NASA/ESA Hubble Space Telescope shows a trio of merging galaxies in the Boötes constellation. These three galaxies are on a collision course and will eventually merge into a single larger galaxy, distorting one another's spiral structure through mutual gravitational interaction in the process.



(Image credits: ESA/Hubble & NASA, M. Sun)

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### ***3. Artemis II and III***

Another step for the Artemis II mission has been completed, with the announcement of the crew: mission commander is Reid Wiseman, the pilot is Victor Glover, with mission specialists Christina Hammock Koch and Jeremy Hansen. Looking even further ahead, the streamlined Artemis III spacesuits, designed by Axiom Space, are now ready.



(Image credits: Axiom Space)

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#### 4. **5th COSPAR Symposium: Talks**

**Singapore: 16-21 April 2023**

Three keynote talks are scheduled:

-"**Earth and Space Exploration with Small Satellites**"

-"**Present-day Sea Level Rise: the Role of Satellite Observations**"

-and "**How Can Next-gen Microsatellites Contribute to Space Science and Technology?**"

with three plenary lectures:

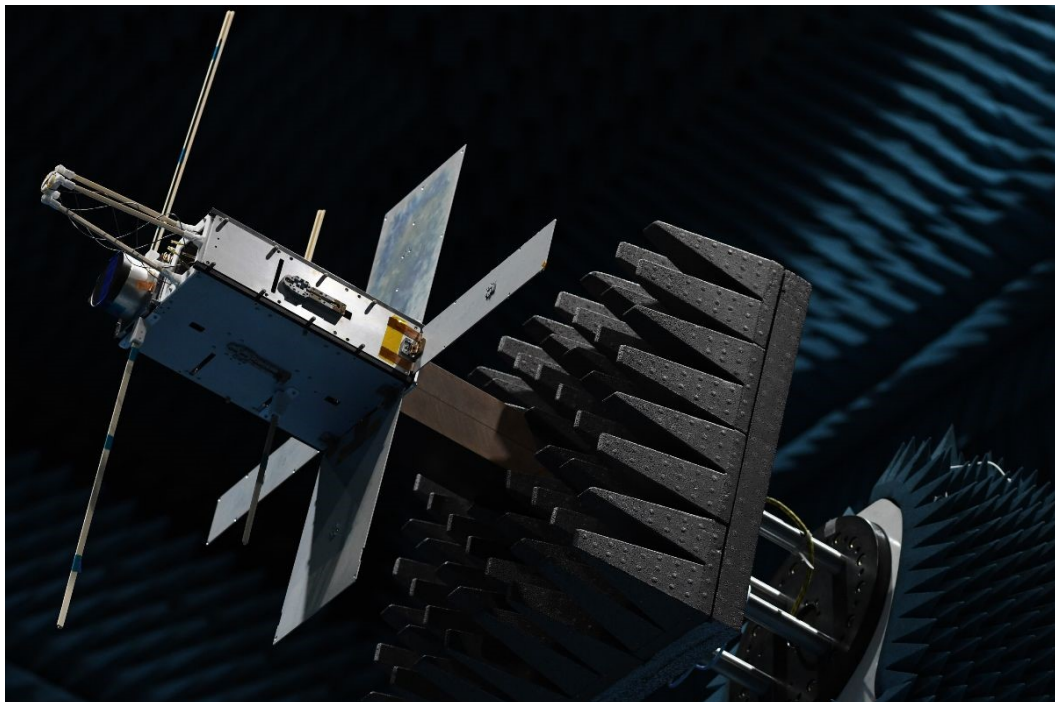
-"**Overview of Japanese Small Satellite Science Missions,**"

-"**NASA Smallsat Missions for Science and Technology Demonstration,**"

-"**Micro/Nano Satellite Technologies for Space Science and Application in China**"

Details of these, and other events, can be found [at this link](#).

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**5th COSPAR Symp. Sessions****Singapore: 16-21 April 2023**

The scientific programme offers sessions from a number of COSPAR's Scientific Commissions and Technical Panels, including

[-SC A for Earth Observation and Environment Monitoring from Small Satellites](#)

[-SC B: Deep-space Science and Exploration with Miniaturized Systems](#)

[-PoIS: Enabling Technologies from Small Satellites](#)

[-PSW: Microsatellites for Space Weather and Radio Astronomy](#) and a multitude of accompanying poster presentations.

More information on the scientific programme is [available here](#).

*(Image credit: ESA- G. Porter)*

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## 5. Addressing Challenges for Girls in STEM

Also during the Symposium, COSPAR's Inclusion, Diversity, Equity and Accessibility (IDEA) Initiative is organising a session on "[Promotion of Women in Engineering, Research, and Science \(POWERS\): Addressing Challenges for Girls in STEM through Mentoring](#)". A diverse panel of experts focused on advancing diversity in STEM will share perspectives in this session on 19 April.



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## 6. COSPAR 2024 Taking Shape

For two days mid-March the COSPAR Programme Committee met in-person and virtually to firm up the programme for COSPAR 2024, to be held in Busan, South Korea. You'll soon find out how we're improving this major event, with welcome changes such as more prominence for Early Career scientists and posters, and more accessible Interdisciplinary Lectures. Watch this space for more news.



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## 7. COSPAR Fellowship Programme

Did you know that COSPAR runs a Fellowship programme for participants of our Capacity Building Workshops? This enables young scientists to build on skills gained at the workshop, offering visits of 2-6 weeks duration for discussing ideas for a future workshop or carrying out joint research with one of the lecturers of the corresponding workshop. More details can be found [here](#). The next application deadline is 30 April 2023.





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## 8. **COSPAR CBWs in 2023**

COSPAR's Capacity Building Workshops (CBW) for 2023 are well under way. So far two workshops have already taken place, in Antofagasta, Chile in January (the photo is of some participants at the ESO Paranal Observatory), and in Potchefstroom, South Africa. The workshops are a great way to acquire skills and expand your network. The next one, on the [International Reference Ionosphere](#), is planned in May, [details of all CBW here](#).



## Congratulations to Mariano Méndez

Congratulations to Mariano Méndez, Chair of the COSPAR Capacity Building Fellowship Program and Alumni Panel! He has been awarded the 2023 Jocelyn Bell Burnell Inspiration Medal



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## 9. Industry Corner

Did you know that the COSPAR website has a dedicated page for news from space-sector

business, the Industry Corner? This is where you can find articles from members of the Committee on Industry Relations, the most recent being: "Gaia Sky Mapper vs Astrometry & Astrophysics: News from the Orbit" and "The Next Era of Weather Forecasts: The Aerospace Industry and Space Weather."

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## 10. *SRT* to Go Online

Watch your inbox! *Space Research Today* will be freely accessible online very soon, embedded on our website. Here's a sneak peek at the new look...

### Meeting Report

Report on the COSPAR Capacity Building Workshop  
"Planetary Sciences Data Analysis"  
Antofagasta, Chile, 16-27 January 2023  
(Carlos Gabriel, Chair of COSPAR Panel on Capacity Building)

The workshop took place at the Universidad Católica del Norte (UCN) in Antofagasta, the core of the Atacama Desert, from 16 to 27 January 2023. Organised mainly by COSPAR together with UCN, the University of Chile (Santiago de Chile) and the Uruguayan University of the Republic, it was supported by international organisations, such as the space agencies NASA and ESA and the European Southern Observatory (ESO). It was also sponsored by local organisations such as the Meteorological Society, the Centre for Astrophysics and Related Technologies (CATA), the Millennium Institute of Astrophysics and the Geological Society of Chile. The company L3Harris contributed by offering free IDL licenses for the students for 6 weeks.

The workshop was proposed and organised locally by Prof. Millarca Valenzuela from UCN, Prof. Gonzalo Tancredi from the Universidad República del Uruguay who scientifically directed it, and Prof. Patricio Rojas (Universidad de Chile).

The aim of the workshop was to develop interesting scientific projects guided by experts from missions such as Hayabusa 2, Mars Express, JUNO, New Horizons and DART. This involved learning various analysis tools such as Spice, Small Body mapping Tool and programmes dedicated to the specific analysis of data from the different missions. Representatives from NASA's Planetary Data System, JAXA's Science Data Archive and ESA's Planetary Science Archive assisted in the extraction and management of data from the various databases.

Details of the workshop can be found on the Capacity Building Programme pages (<https://cospar-iba.cnes.fr/Meetings/Workshops.htm>) and on the local website (<http://cospar.dia.uchile.cl/>).

#### Participants

A total of 37 candidates were selected out of a total of 101 candidates. The selected students were all, with one exception, from Latin American countries (11 from Chile, 9 from Brazil, 6 from Argentina, 3 from Uruguay, 3 from Mexico and 1 each from Bolivia, Colombia, Ecuador, Peru and Japan). These workshops are defined as regional, for several reasons, including financial ones. A good candidate from a different region has to bear the costs of his or her participation. A couple of the originally chosen students had withdrawn their participation a few weeks before the event, but were easily replaced by other candidates. The limitation to 37 students was mainly due to financial reasons, the somewhat low local funding together with inflation especially related to flight costs forced us to be very conservative from the beginning.

The geographical distribution of the students showed a strong regional diversification. The gender distribution showed a 57/43% female/male student ratio, which is quite typical considering the workshops previously organised in this region.

#### Lecturers

For most of the speakers/supervisors this was their first participation in a COSPAR Capacity Building Workshop (CBW), most of them were sent by the space missions we have consulted: Juno, a NASA space probe orbiting Jupiter, sent

*"The aim of the workshop was to develop interesting scientific projects guided by experts from missions such as Hayabusa 2, Mars Express, JUNO, New Horizons and DART"*



From left to right:  
1. Telescopes from UCN  
2. Sunset  
3. The four Very Large Telescopes at Paranal  
4. Searching for meteorites  
5. Participants and lecturers on the last day of the Capacity Building Workshop

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## 11. *ASR* Special Issues Call

Interested in *Advances in Space Research (ASR)* Special Issues? Here are the latest Calls for Papers:

**-Synergistic Use of Remote Sensing Data and In-Situ Investigations to Reveal the Hidden Secrets of the Moon:** deadline **extended to 30 April 2023**

**-Information Theory and Machine Learning for Geospace Research:** deadline 31 May 2023

**-Global Navigation Satellite Systems: Recent Scientific Advances:** deadline **extended to 30 June 2023**

**-Advanced Methods for Geodesy, Metrology, Navigation and Fundamental Physics:** deadline **extended to 31 July 2023**

**- Progress in Cosmic Ray Astrophysics:** deadline 31 October 2023.

For recently published/free to read Special Issues, [click here](#).

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## 12. Switzerland National Report

Read about Switzerland's active space research sector and its contribution to a variety of missions, from the SPICE and EUI instruments on Solar Orbiter to the Interstellar Mapping and Acceleration Probe (IMAP) and the Mars Ions and Neutral Particles Analyser, [accessible on the COSPAR website.](#)



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## 13. COSPAR Member News

### ASI to Provide Data for Cultural Heritage

The Italian Space Agency - ASI - has signed an agreement with the Italian Ministry of Culture to collect and share data on Italian cultural heritage. The data acquired by COSMO-SkyMed, a dual system based on a constellation of satellites for the observation of the Earth, was developed in cooperation with the Ministry of Defense.



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## COSPAR Member News

### IUPAP Interdisciplinary Early Career Scientist Award

The call for nominations for the IUPAP Interdisciplinary Early Career Scientist Award is now open. The award was established to recognize the contributions of Early Career Scientists who do interdisciplinary research

that does not fit within a single subfield of physics as covered by one IUPAP Commission Nomination deadline: 31 May 2023.



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## 14. News from Space Agencies

### Egypt Signs to Host African Space Agency HQ

COSPAR congratulates Egypt on signing the bid to host the African Space Agency headquarters in Space City, outside Cairo. The agency is intended to have a coordination role and promotes space policy and cooperation in the African Union.



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## On the Radar

### European Start-up to Launch Reusable Rocket

A Franco-German start-up, The Exploration Company, which recently raised 40 million euro, is to launch a reusable rocket in 2024. The rocket, called "Nyx", is modular and can be refuelled in orbit.

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## On the Radar

### Space Pioneer Nears Launch

Space Pioneer, aka Beijing Tianbing Technology Co., Ltd., is developing the first liquid methane-fuelled orbital launch vehicle, the Tianlong-2 (ZQ-2). The vehicle is intended to launch a 2000-kg payload into a low 200-km orbit, with the first launch programmed in March.



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## On the Radar

### 1st Irish Satellite Launch Delayed

EirSat-1 (Educational Irish Research Satellite), Ireland's first CubeSat, has been delayed due to problems with a Vega C rocket. EirSat-1 had originally been scheduled to launch on a Vega C from French Guiana later this year.

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# 15. **Employment / Internship Opportunities**

The [International Astronomical Union \(IAU\)](#) is looking for a [Membership Coordinator](#). Deadline for applications 5 May 2023. An Announcement of Opportunity for [interdisciplinary scientists in the Comet Interceptor mission](#) (ESA-SCI-C-AO-008). Letter of Intent deadline: 20 April 2023.

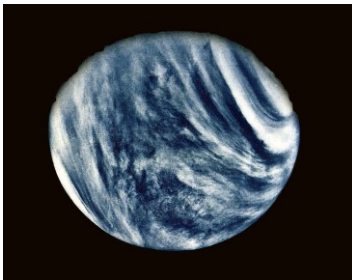
4th Announcement of Opportunity for the [CHEOPS Guest Observers Programme](#). Deadline for Phase 1 observer proposals: 25 May 2023.

**See the [Employment / Internship / Opportunities](#) on the **COSPAR** website under the **Latest News** menu for details. Associates are kindly invited to forward similar announcements to [cosparcom@cosparhq.cnes.fr](mailto:cosparcom@cosparhq.cnes.fr)**

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## 16. Space Science Quote

"We came all this way to explore the moon, and the most important thing is that we discovered the Earth." William Anders

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## 17. Space Science Highlights from the Past

A month of firsts for the US *Mariner 10* mission in February 1974: the first photo of Venus from space, the first spacecraft to use gravity assist to reach another planet, passing by Venus on 5 February 1974 on its way to explore Mercury—and the first mission to explore two planets. This first close-up image of Venus is colour-enhanced to bring out Venus's cloudy atmosphere.

(Image credit: NASA)

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### Contribute to COSPAR News!

If you have an announcement or item of news for the COSPAR—and wider space—community, please send it to [leigh.fergus@cosparhq.cnes.fr](mailto:leigh.fergus@cosparhq.cnes.fr)



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