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Message from the Editors

A lot has happened since our last newsletter, including the successful launch of *Artemis I*, the first integrated flight test of the Orion spacecraft and the Space Launch System rocket. We include a snapshot in celebration of this event.

In this issue of COSPAR News we also bring you information about future COSPAR events and we'd like to draw your attention in particular to the 5th COSPAR Symposium next year—the deadline for abstract submission is fast approaching: 31 December 2022 (if you're new to our system, please read the detailed instructions on how to submit your abstract). There's news from our flagship journals, Advances in Space Research and Life Sciences in Space Research, information concerning changes in Space Research Today and the next event for the COSPAR IDEA initiative as well as our pick of items On the Radar in our space community.

We hope you enjoy reading this issue of COSPAR News as much as we enjoyed putting it together. Remember, if there's something you'd like to see or read here—and there on Social Media—don't hesitate to get in touch.

Leigh Fergus and Richard Harrison

Space Science Snapshot: Back to the Moon

On the first integrated mission, *Artemis I*, an uncrewed Orion will venture thousands of miles beyond the Moon over the course of about six weeks. The Orion spacecraft with European Service Module will fly farther from Earth than any human-rated vehicle has ever flown. This is an expanded view of the Orion spacecraft and its components.



(Image credit: NASA)

Space Science Snapshot: Jupiter's Inner Life

This composite image of Jupiter was taken by the James Webb Space Telescope's Near-Infrared Camera (NIRCam) which has three specialized infrared filters that showcase details of the planet.



(Image credits: NASA, ESA, CSA, Jupiter ERS Team; image processing by Judy Schmidt.)

5th COSPAR Symposium

Abstract deadline: 31 December 2022

Do you use small satellites for space research? Come and present your findings at the 5th COSPAR Symposium: "Space Science with Small Satellites". Abstract submission ends: 31 December 2022. Here's the outline of the Scientific Events at the Symposium (click on the underlined text for more details: S.1 Space Science with Small **Satellites** S.2 Space Debris Monitoring and Mitigation Using Small Satellites A.1 Earth Observation and Environment Monitoring from Small Satellites B.1 Space Science and PCB.1 Capacity Building with Small Satellites—a COSPAR-INSPIRE Longterm Plan

PoIS.1 <u>Enabling Technologies from Small Satellites</u>
PSW.1 <u>Microsatellites for Space Weather and Radioastronomy</u>
TGCSS.1 <u>Task Group on Establishing a Constellation of Small Satellites</u>
<u>Townhall</u>



Meet the Symposium Team





















At the 5th COSPAR Symposium you'll have plenty of opportunity to meet the <u>Local Organising Committee</u>, pictured above, and the <u>Scientific Organising Committee</u>. As well as finding out the latest developments in satellite research during the Scientific Events, don't miss the Roundtable of Space Agency Leaders and the Asia-Pacific/ASEAN Regional Forum Discussion to hear what else is happening in space (Monday 17 April and Tuesday 18 April, respectively).

5th COSPAR Symposium: Singapore: 17-20 April 2023

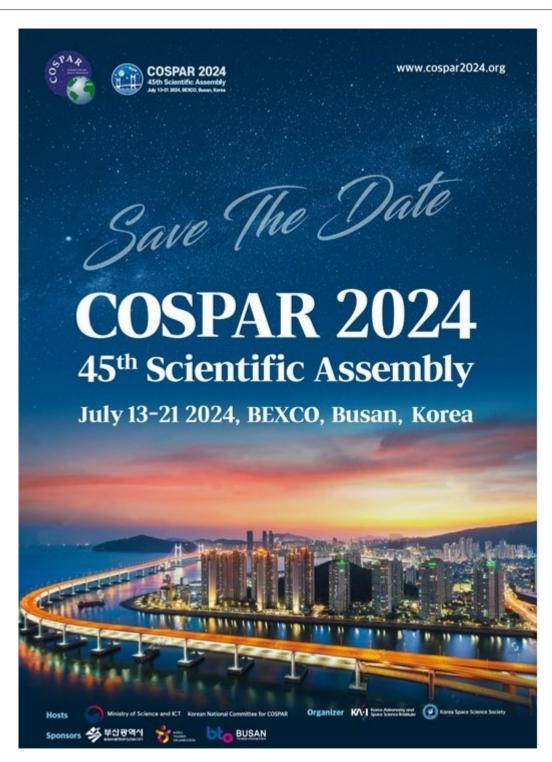
Abstract deadline: 31 December 2022

COSPAR IDEA Initiative

COSPAR's Inclusion, Diversity, Equity and Accessibility initiative will be organising a session, "Promotion of Women in Engineering, Research and Science (POWERS): Addressing Challenges for Girls in STEM through Mentoring" at the 5th COSPAR Symposium, scheduled on Wednesday 19 April 2023. Keep



an eye on the <u>Symposium website</u> for details. Also, if you want to get involved in IDEA, for example by contributing to the early planning of an IDEA Workshop at the 2024 Scientific Assembly in Busan, South Korea, please <u>contactus</u>.



45th COSPAR Scientific Assembly

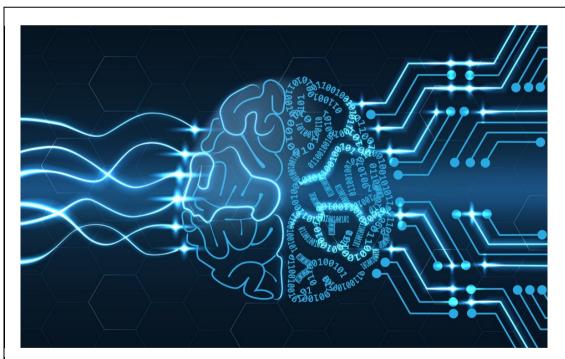
Busan, S. Korea: 13-21 July 2024

Save the Date and posters to download and display here.

COSPAR Capacity Building Workshops

Did you know that part of the registration fees for COSPAR Assemblies goes towards funding Capacity Building Workshops and supporting scientists from developing countries to take part? Find out about upcoming workshops on the <u>COSPAR website</u> and the <u>Panel on Capacity Building</u>.





Panel on Innovative Solutions

The <u>COSPAR Panel on Innovative Solutions</u> (PoIS) aims to bring state-of-the-art technology to bear on the hardest problems facing COSPAR researchers and provides the insight into rising capabilities that hold promise in the next 5-10 years, like quantum computing. Diversity of ideas

and backgrounds are paramount to arriving at the best solutions, so bring us your hardest problems and your innovative ideas. <u>Join us!</u>



COSPAR on Social Media

Be sure to check the COSPAR social media accounts on <u>Twitter</u>, <u>LinkedIn</u> and <u>Facebook</u> and our <u>YouTube</u> channel: don't hesitate to like, tag, share and subscribe. And if you have any links to videos you'd like to share, <u>please send them</u> we look forward to engaging with you online!

SRT to Go Online

The last paper issue of *Space Research Today* (*SRT*), COSPAR's information bulletin, will come out in December–from April 2023 it will be freely accessible online, embedded on our website. In this final hard-copy version, look out for "The Three Laws of Space Exploration"...



ASR Special Issues



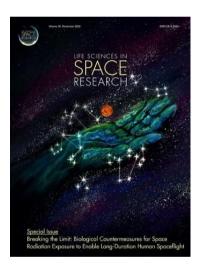
Many articles in *Advances in Space Research* are available to read for free online.

Explore all the OpenAccess articles here.

LSSR Special Issue

Breaking the Limit: Radiation Countermeasures for Space Exploration Exposure

This special issue of Life Sciences in Space Research (Vol. 35, November 2022) is Open Access and a number of review articles from LSSR are free to read.

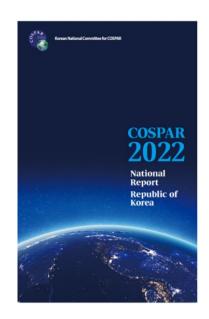


COSPAR Book Series

Want to be Editor of a volume in the COSPAR Book Series? Then contact our Series Editor to COSPAR Series discuss your project.







South Korea National Report

With the support of Korea International Cooperation Agency and the UN Economic and Social Commission for Asia and the Pacific, 20 Pandora systems will have been installed in 13 countries within the GEMS field of Regard by end 2022. South Korea is thus now part of the GEO Air Quality (AQ) Constellation (with NASA's TEMPO & ESA's future Sentinel-4), the first of its kind to monitor global air quality in a coordinated manner. Read about this and other developments in space science from South Korea in the South Korea National Report for COSPAR

URSI is 100

Congratulations to the International Union of Radio Science, one of COSPAR's Scientific Union members, which celebrates its 100th anniversary this year. Founded in 1922 as the Union Internationale de Radiotélégraphie Scientifique, it changed its name in 1928 and hasn't looked back since.



News from Space Agencies

ESA Ministerial

The European Space Agency Council at Ministerial level held in Paris on 22-23 November mapped out and endorsed the ESA programme for the coming years. The member states "confirmed that Europe's independent access to space is crucial to secure the benefits that space brings to life on Earth-including climate change monitoring and mitigation, secure

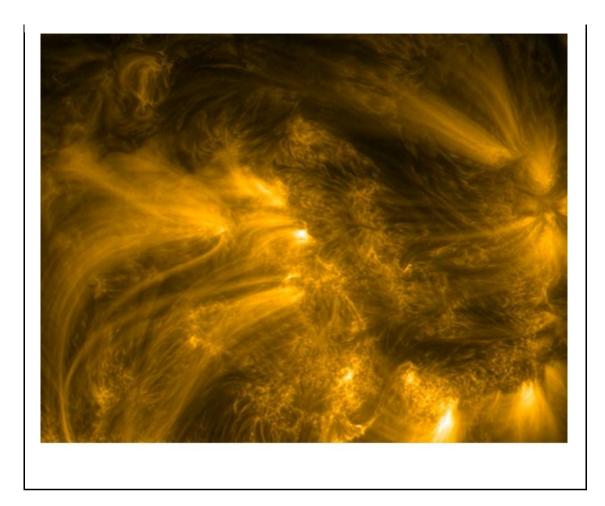
communications and navigation under European control, and rapid and resilient responses to crises."



On the Radar

Unprecedented View of the Quiet Corona from Solar Orbiter

On 12 October 2022 the ESA-led Solar Orbiter passed through its perihelion, passing our star just 29% of the Earth's distance from the Sun and producing the closest images ever taken of the Sun. On 13 October the Orbiter's Extreme Ultraviolet Imager (EUI) returned the highest resolution movie of the quiet solar corona ever taken with any instrument. Each pixel spans 105 km on the surface of the Sun. This means that if EUI were to look at the Earth from this distance, our planet would span just 120 pixels across. The movie itself contains 2048 pixels across, meaning that 17 Earths would fit side by side across this image.



(Image credits: ESA & NASA/Solar Orbiter/EUI Team; acknowledgement: Frédéric Auchère, IAS)

On the Radar

ESA Selects Parastronaut for 2022 Astronaut Class

The new 2022 ESA astronaut class includes five career astronauts, 11 reserve astronauts as well as one astronaut with a physical disability. The latter will take part in the Parastronaut Feasibility Project to develop options for the inclusion of astronauts with physical disabilities in human spaceflight and possible future missions.



Employment/Internship Opportunities

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

Space Science Quote

"There are no passengers on planet earth. We are all crew." Marshall McLuhan



Space Science Highlights from the Past

The most recent crewed landing on the Moon was 50 years ago with the *Apollo 17* mission, and featured a number of scientific experiments. This image of Earth seen from *Apollo 17* is now known as the Blue Marble.

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













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