

# COMMITTEE ON SPACE RESEARCH - COSPAR



**Established in 1958 under the International Science Council (ISC), the Committee on Space Research (COSPAR) aims to advance scientific research in space on a global scale**

**Pascale EHRENFREUND  
COSPAR President**



# COSPAR SCIENTIFIC COMMISSIONS

<b>A</b>	<b>Space Studies of the Earth's Surface, Meteorology and Climate</b>
<b>B</b>	<b>Space Studies of the Earth-Moon System, Planets, and Small Bodies of the Solar System</b>
<b>C</b>	<b>Space Studies of the Upper Atmospheres of the Earth and Planets Including Reference Atmosphere</b>
<b>D</b>	<b>Space Plasmas in the Solar System, including Planetary Magnetospheres</b>
<b>E</b>	<b>Research in Astrophysics from Space</b>
<b>F</b>	<b>Life Sciences as Related to Space</b>
<b>G</b>	<b>Material and Fluid Sciences in Space Conditions</b>
<b>H</b>	<b>Fundamental Physics in Space</b>





# COSPAR MEMBERS AND ASSOCIATES



**13** International  
Scientific Unions

**48** National  
Scientific Institutions

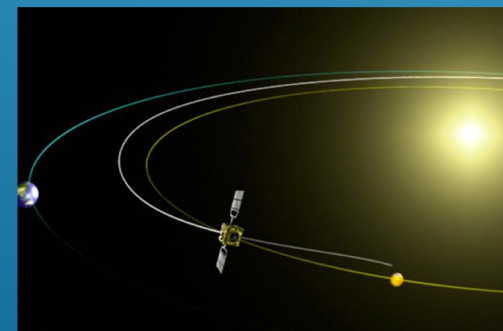
**14,000**  
Associates

# COSPAR AND THE UNITED NATIONS - 1962



COSPAR was the first organization to be granted an observer status in the **United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS)**

**Today COSPAR cooperates with UN COPUOS on:**  
Planetary Protection, Satellite Dynamics, Space Debris, Space Weather,  
Mission Planning, Planetary Defense, Space Resources, Space Sustainability,  
UN-COSPAR Symposia



# COSPAR CENTER OF EXCELLENCE

## Capacity Building in CubeSat Technologies



**Partner: Laboratory for Atmospheric and Space Physics (LASP)  
University of Colorado, Boulder, USA**



**LASP** has been at the forefront of pioneering CubeSat missions and has a leadership role in the International Satellite Program in Research and Education (INSPIRE)

The establishment of COSPAR's inaugural **Center of Excellence** in May 2024 will help make space exploration more accessible and empower the next generation of space scientists and engineers





# COSPAR CENTER OF EXCELLENCE

## International Space Innovation Centre Cyprus



COSPAR is proud to announce the creation of the **COSPAR International Space Innovation Centre**, in partnership with the Cyprus Space Exploration Organization.

It was inaugurated during the **C-SpaRC** (Cyprus Space Research and Innovation Centre) Summit in Nicosia, Cyprus, 21-26 June 2024

C-SpaRC is co-funded by the European Union and Cyprus' Research and Innovation Foundation

### Partners:

NASA's MSFC

Translational Research Institute for Space Health (TRISH)

Sodankylä Geophysical Observatory (SGO)

Lockheed Martin





# COSPAR's PANEL on PLANETARY PROTECTION

Chair: Athena Coustenis



For more than 60 years **COSPAR's Panel on Planetary Protection** has set forth policies with detailed standards aimed at safeguarding celestial bodies from the adverse effects of biological contamination



<https://cosparhq.cnes.fr/scientific-structure/panels/panel-on-planetary-protection-ppp/>

Space Agencies, Experts, Industry, UN COPOUS

Newly restructured and edited  
***COSPAR Policy on Planetary Protection 2024***



# COSPAR'S PANEL on SPACE WEATHER

Chair: Mario Bisi



- **COSPAR Panel on Space Weather (PSW)** hosts a global hub, the International Space Weather Action Teams (ISWAT), for community coordinated collaborations addressing challenges across the field of space weather



- Community 700+ people, 50+ countries, 400+ affiliations
- 80+ Action Teams registered by the community (17 Clusters)



- WMO-ISES-COSPAR Coimbra Declaration issued in 2023
- ASR: COSPAR Space Weather Roadmap 2022–2024: “Scientific research and applications”, June 2025



# COSPAR's Panel on EDUCATION



- COSPAR's Panel on Education has organized professional development opportunities for teachers since 2012, benefiting over 300 educators
- EXpeditionary Program for Learning OppoRtunities in analog space Exploration (EXPLORE) <https://explore-project.eu>
- Students As Planetary Defenders (StAnD) <https://projectstand.eu>







# Immersive Experiences

## Training like an astronaut

EXPLORE

Safety and Training



## DRESSING FOR THE OCCASION

EXPLORE



## Jr. Astronauts

EXPLORE



## Weekend Getaway on Mars

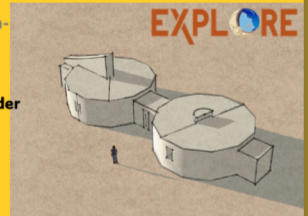
**Martian Living Quarters:** Futuristic and eco-friendly, with Martian decor and views.

**Dining Experience:** Astronaut and Martian-themed cuisine.

**Mars Rover driving**

Simulated spacewalks and star gazing under a "Martian Sky"

EXPLORE



## Exploring the landscape

EXPLORE

Observing with drones

Extravehicular Activities (EVA)

Scientific Workshops

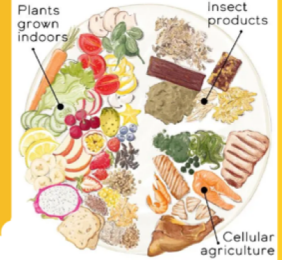
Virtual Reality (VR) Experiences



## What is the menu for today?

### The Martian Diet

For future Mars citizens and sustainability on Earth



### Space Cuisine Tasting:

- Martian diets (e.g., hydroponically grown vegetables, algae-based protein).
- Nutritional Challenges
- Prepare your meal using space-friendly ingredients.

EXPLORE

## "Exploring Mars"

- Explore a "Martian terrain".
- Experience the thrill of traversing craters, canyons, and alien rock formations.
- Collect geological samples and contribute to citizen science initiatives.

Feel the "Martian dust" beneath your boots!

EXPLORE

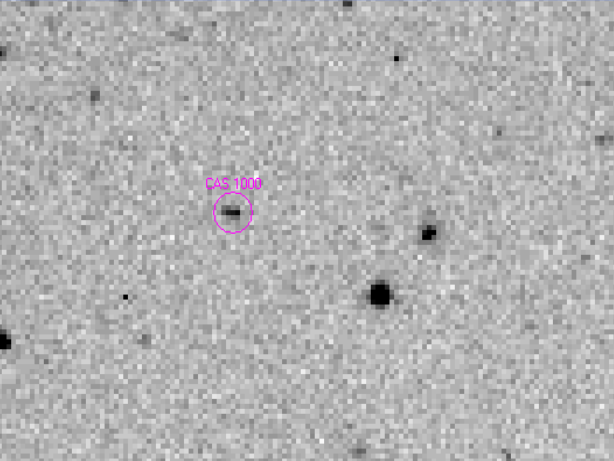
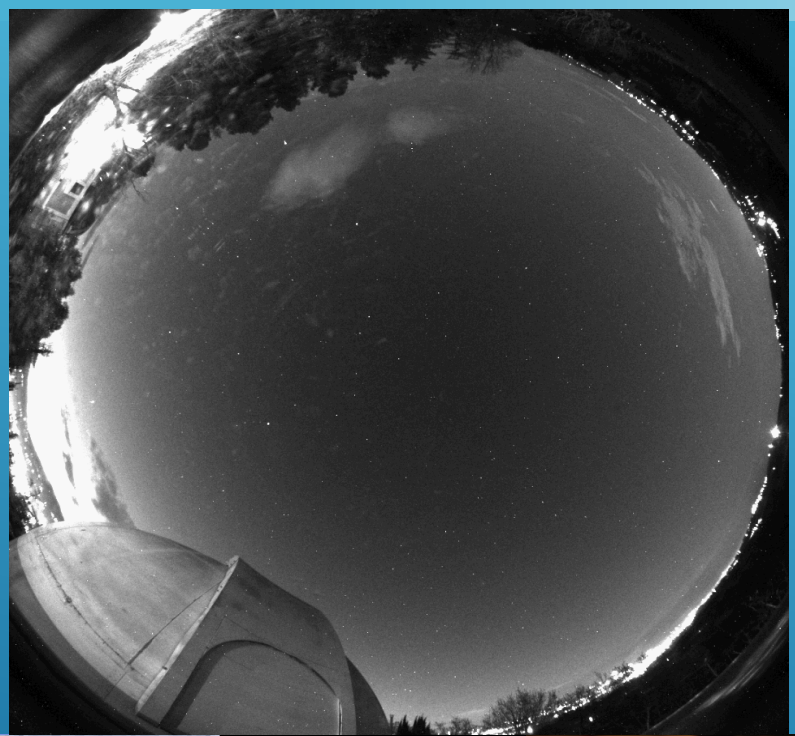






# 70 countries

# Hundreds of schools and thousands of students





Prof. P. Willmore  
(1931-2021)



- > 50 workshops in 22 countries
- > than 1,200 students from > 70 countries

# 2001-2023: Two Decades of COSPAR Capacity Building Workshops

has been encouraging scientists in developing countries  
to use scientific data from space missions.

# CAPACITY BUILDING WORKSHOPS 2025

<https://cosparhq.cnes.fr/events/cospar-capacity-building-workshops/>



## Panel on Capacity Building (Chair: Carlos Gabriel)

**International Reference Ionosphere & NeQuick**  
Improving the Representation of the Real-time Ionosphere  
29 September – 10 October 2025, Trieste, Italy



**16<sup>th</sup> Pan Ocean Remote Sensing Workshop, PORSEC 2025**, 22-26 April in Keelung, Taiwan, China Academy of Sciences located in Taipei

**Hands-on Workshop with JWST and UVIT: “Galaxies on a Resolved Scale”**, Bangalore, India, in October 2025



# COSPAR Panel on establishing a Constellation of Small Satellites (PCSS)



**Chair: Dan Baker, Vice-Chair: Amal Chandran**

- PCSS addresses the objective of studying the near-Earth space environment using instruments onboard small orbiting satellites
- **Initial focus:** Space weather, radiation belt research and Earth observation
- **Sub-Group on Radiation Belt (SGRB)** will focus on the implementation of a constellation of small/cube satellites taking a high time resolution survey of the Earth's radiation radiation belt





# COSPAR SMALL SATELLITE PROGRAM



## COSPAR Smallsat Roadmap (2019)

- COSPAR as “honest broker”, coordinating implementation with all partners, and distributing the data
- Currently active in 4 domains: **ionosphere, radiation belt, Earth atmosphere, lunar science**

### Three satellite projects under consideration/development:

- **COSPAR-1 (Launch in 2025)**
- **COSPAR-2**
- **COSPAR-3 CORBES**



# COMMITTEE on INDUSTRY RELATIONS (CIR)



- COSPAR recognizes that there is important mutual interest for the benefit of both industry and COSPAR – space ecosystem
- CIR is dedicated to exploring effective ways of integrating industry capabilities with international space research efforts
- **17 significant space company members**



## Industry Corner

<https://cosparhq.cnes.fr/scientific-structure/industry-corner/>

# COSPAR PUBLICATIONS

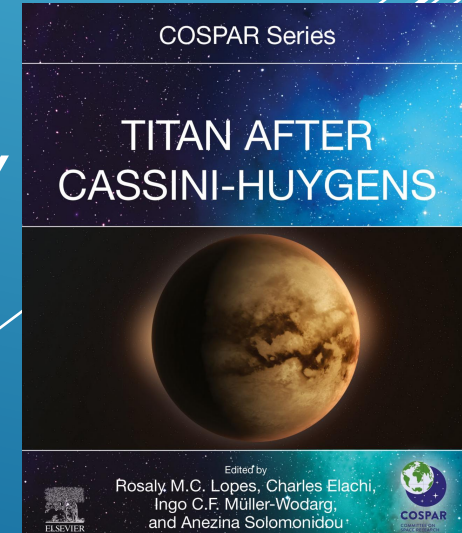


## Peer-reviewed journals:

- *Advances in Space Research* (Impact Factor: 2.8)
- *Life Sciences in Space Research* (Impact Factor: 2.9)

## In-house publications:

- *Space Research Today*
- *COSPAR News*





# Team Spirit in Space Research

**45<sup>th</sup> COSPAR Scientific Assembly**

**13-21 July 2024**

**Busan, South Korea**



The city with Business  
and tourism





# HIGHLIGHTS COSPAR 2024



- 3000 talks and posters about latest discoveries
  - Amazing interdisciplinary lectures and panels
  - Topical lunches and industry panels
  - Exhibitions from space agencies/industries/organizations
- 
- First international conference:  
Korea Aerospace Administration (KASA) (inaugurated 27 May 2024)
  - For the first time, COSPAR brought together space leaders from **KASA**, NASA, CNSA, ISRO, JAXA, ASI, and the UAE
  - COSPAR's new community-driven Space-Weather Roadmap and New Policy on Planetary Protection 2024 were presented





**COSPAR**  
**SYMPOSIUM**  
**2025**

**3-7 November 2025,  
Nicosia, Cyprus**

**”A Symposium on Humanity's Challenges and Celestial Solutions”**



**COSPAR**  
COMMITTEE ON  
SPACE RESEARCH

HOSTED BY



**Cyprus Space Exploration Organisation**

The Context  
*Humanity's Challenges &  
the Potential of Space*

THE 6<sup>th</sup>  
**COSPAR**  
SYMPOSIUM

November 3<sup>rd</sup> – 7<sup>th</sup>, 2025  
Nicosia, **Cyprus**



- Space Tech for Earth & Beyond  
*Innovation, AI, & Sustainable Solutions*
- Space as a Unifying Force  
*Fostering International Collaboration*
- Responsible Exploration  
*Responsible Space Endeavours*
- Capacity Building  
*CubeSats & Outreach Event*



**COSPAR**  
COMMITTEE ON  
SPACE RESEARCH



**COSPAR**  
SYMPOSIUM  
**2025**

**CSEEO**  
Cyprus Space Exploration Organisation



# See you in Florence....



**COSPAR**  
**2026**

Florence  
1-9 August

46<sup>th</sup>  
Scientific  
Assembly

Sustainable  
space research  
for the planet



**INAF**  
ISTITUTO NAZIONALE  
DI ASTRONOMIA





# COSPAR 2026



## 46<sup>th</sup> COSPAR Scientific Assembly and Associated Events Florence, Italy, 1 - 9 August 2026

150 core scientific program and numerous special events

In cooperation with Istituto Nazionale di Astrofisica (INAF)

Scientific program and abstract submission: Nov 2025

<https://www.cospar-assembly.org>





# QUESTIONS/COMMENTS?



<https://cosparhq.world>



Committee on Space  
Research - COSPAR



[cospar@cosparhq.cnes.fr](mailto:cospar@cosparhq.cnes.fr)



Committee on Space Research



COSPAR



[@COSPAR@astrodon.social](https://mastodon.social/@COSPAR)



cosparhq



[bsky.app/cospar.bsky.social](https://bsky.app/cospar.bsky.social)

