

# COSPAR

ESTABLISHED BY ISC: THE INTERNATIONAL SCIENCE COUNCIL

## COMMITTEE ON SPACE RESEARCH

President: Prof. P. Ehrenfreund

Executive Director: Dr J.-C. Worms



### COSPAR PANEL ON PLANETARY PROTECTION

Chair: Dr Athena Coustenis

Vice Chairs: Mr Niklas Hedman and Dr Peter Doran

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

## COSPAR Panel on Planetary Protection Meeting

*(in Vienna and remotely)*

### Minutes

### AGENDA *(all times in CET and indicative)*

#### 6 December 2023 (OPEN SESSION)

1. **10.00-10.15 Welcome introduction and purpose of the meeting** (*A. Coustenis*)
2. **10.15-10.30 Introduction by COSPAR President and Executive Director** (*P. Ehrenfreund, J.-C. Worms*)
3. **10.30-11.00 Overview of COSPAR PPP activities** (*PPP Leads*)
4. **11.00-13.00/14.00-15.00 Presentations by space agency, industry and other institution representatives** (*TBD*)
5. **15.00-16.00 Discussion on Icy Worlds** (*introduction by P. Doran*)
6. **16.30-17.00 Planetary protection for Ceres** (*introduction by J. Castillo-Rogez*)
7. **17.00-17.45 Upcoming possible updates to the COSPAR PP Policy** (*introduction by N. Hedman*)
8. **17.45-18.30 AOB and open discussion**

## **PARTICIPANTS**

### **PANEL MEMBERS**

**Athena COUSTENIS**, Panel Chair  
**Peter DORAN**, Panel Vice-Chair  
**Niklas HEDMAN**, Panel Vice-Chair  
**Eleonora AMMANNITO**  
**Silvio SINIBALDI**  
**Frank GROEN**  
**Olivier GRASSET** (attending remotely)  
**Alexander HAYES**  
**Praveen KUMAR KUTUANPILLAI** (attending remotely)  
**Christian MUSTIN** (attending remotely)  
**Karen OLSSON-FRANCIS**  
**Olga PRIETO-BALLESTEROS** (attending remotely)  
**Francois RAULIN** (attending remotely)  
**Petra RETTBERG**  
**Omar ALSHEHHI** (attending remotely)  
**Masaki FUJIMOTO**  
**Yohey SUZUKI** (attending remotely)  
**Kanyan XU** (attending remotely)  
**John MOORES** (new member attending remotely)  
**Lyle WHYTE** (new member)  
**Colleen HARTMAN**, Ex-Officio Member (attending remotely)  
**Michael NEWMAN**, Ex-officio Member

### **INVITED GUESTS/SPEAKERS**

**EHRENFREUND P.**, COSPAR President  
**WORMS J-C.**, COSPAR Executive Director  
**JANOFSKY A.**, COSPAR (attending remotely)  
**FIKSK L.**, CoPP (attending remotely)  
**A. HENDRIX**, CoPP (attending remotely)  
**SCHWEHM G.**, CoPP (attending remotely)  
**NARENDRANATH S.**, URSC/India (attending remotely)  
**ERD C.**, ESA (attending remotely)  
**BENARDINI J.N.**, NASA  
**SEASLY E.**, NASA  
**MACEY M.**, OU/UK (attending remotely)  
**COOPER H.**, OU/UK (attending remotely)  
**THOMAS L.**, OU/UK (attending remotely)  
**CASTILLO-ROGEZ J.**, JPL (attending remotely)  
**BOITHIAS H.**, Airbus  
**MARGHERITIS D.B.**, Thales Alenia Space  
**PARDINI C.**, COSPAR/PEDAS (attending remotely)  
**GALLI A.**, COSPAR/PEX (attending remotely)

### **ATTENDEES**

**GEETANJALI K.**, Digantara (attending remotely)  
**ORTEGA UGALDE S.**, ESA (attending remotely)  
**BRUENDL T-M.**, ESA (attending remotely)

**CLEMENT B.**, JPL (attending remotely)  
**KLAUCK J.**, Univ Osnabrueck (attending remotely)  
**SPRY A.**, SETI (attending remotely)  
**GRAHAM H.**, NASA Goddard (attending remotely)  
**TENNEN L.**, Sterns and Tennen (attending remotely)  
**PUGH T.**, McDonald Observatory (attending remotely)  
**SIEGEL B.**, NASA (attending remotely)  
**ISBELL D.**, JPL (attending remotely)  
**FOYER S.**, NASA (attending remotely)  
**MATHOR S.**, NASA (attending remotely)  
**WILLIAMS K.**, NASA (attending remotely)  
**MORGAN T.**, NASA (attending remotely)  
**PUGEL B.**, NASA Goddard (attending remotely)  
**COOPER M.**, JPL (attending remotely)  
**KRAFTON K.**, NASEM (attending remotely)  
**REITZ G.**, (attending remotely)

## **MINUTES**

### **1. Introduction and purpose of the meeting**

The Chair, A. Coustenis, opened the meeting, welcoming all participants. She reviewed the meeting's agenda. She welcomed the new members: Lyle Whyte (expert in cold environments and microbiology) and John Moores (representing the CSA). PPP Vice-Chair Niklas Hedman announced his retirement from UNOOSA.

### **2. Briefing by COSPAR**

COSPAR President, Pascale Ehrenfreund and COSPAR Executive Director, J-C. Worms, gave presentations on general COSPAR items, including the upcoming 45<sup>th</sup> COSPAR Scientific Assembly to be held in Busan, Republic of Korea, 13-21 July 2024.

### **3. Overview of COSPAR PPP activities**

A. Coustenis provided a high-level review of the Panel's purpose, status, and current membership. She also mentioned recent activities, in particular on the COSPAR Planetary Protection Policy, publications and meetings to which Panel members have contributed. She encouraged everyone who had relevant planetary protection information to share, so it could be posted on the COSPAR website (*see PowerPoint presentation*).

### **4. Presentations by space agency, industry, and other institution representatives**

The following space agencies made presentations on ongoing PP-related activities and plans:

- NASA presented the current status of the MSR and Europa Clipper missions; on the crewed knowledge gaps, on organic inventory and metagenomics.
- JAXA's presentation was on the MMX mission launch delay to 2026 due to launcher queue, and also status report on the SLIM landing on the Moon in 2024 etc.
- ESA's presentation recalled the procedural aspects for planetary protection, the upcoming PP handbook, the metagenomic Workshop, and the PP re-entry safety

Panel. There was an invited presentation by C. Erd on the planetary protection implementation for the JUICE mission (*see PowerPoint presentation*).

- ISRO presentation was on the Indian lunar, martian and planetary exploration programme and the Indian agency's plans for planetary protection (*see PowerPoint presentation*).
- UKSA presented on the establishment of an astrobiology contamination lab in UK, and the Inaugural International Planetary Protection Week to be held in London 22-25 April 2024.
- NASEM SSB/CoPP made a presentation on its activities and studies (*see PowerPoint presentation*). The Chair highlighted the important excellent collaboration between the two committees, with efficient and useful exchanges that allow for efficient advances to be made in planetary protection items.

The following industry representatives made presentations on ongoing activities:

- Airbus (H. Boithias) on the ERO mission spacecraft key requirements and implementation. Further, Airbus feedback was provided on PP requirements with mention of need to better define what is Safety Critical Phase and to improve the assessment of the spacecraft contribution to the risk of contaminating the Earth's biosphere.
- Thales Alenia Space presentation was given by D. Margheritis and was on EXOMARS mission (both the 2016 orbiter and the Rover) (*see PowerPoint presentation*)

## **5. Discussion on Icy Worlds**

Presenter: P. Doran (*see PowerPoint presentation*). The paper "The COSPAR Planetary Protection Policy for missions to Icy Worlds: A review of history, current scientific knowledge, and future directions" was submitted for publication in Life Sciences in Space Research. This provides the analysis needed for moving forward with possible updates to the COSPAR PP Policy related to the outer solar system bodies.

## **6. Planetary protection for Ceres**

Presenter: J. Castillo-Rogez (*see PowerPoint presentation*). The understanding of Ceres based on results of the Dawn mission in focus and analysis of categorization of Ceres in light of the classification of "Icy Worlds".

## **7. Upcoming possible updates to the COSPAR PP Policy**

Overview by N. Hedman of the ongoing process by the PPP Subcommittee on presenting a new version of the Policy. Project to restructure and edit the text of the current version for consistency and better understanding. No substantive changes to the Policy, only editorial for better readability. The updated Policy is expected to be submitted to COSPAR Bureau validation in March 2024.

## **8. AOB and open discussion**

No further items raised. The Chair thanked everyone for their attendance. Open Session concluded at 18:30.