

IAF SPACE EXPLORATION SYMPOSIUM (A3)
Space Exploration Overview (1)

Author: Dr. Athena Coustenis
LESIA - Observatoire de Paris, France, athena.coustenis@obspm.fr

Mr. Niklas Hedman
United Nations Office at Vienna, Austria, niklas.hedman@unoosa.org
Mr. Gerhard Kminek
European Space Agency (ESA), The Netherlands, gerhard.kminek@esa.int

PLANETARY PROTECTION: AN INTERNATIONAL CONCERN AND RESPONSIBILITY

Abstract

Planetary Protection is at the heart of space exploration. The international standard for planetary protection has been developed by the Committee on Space Research (COSPAR) which provides a forum for international consultation and has formulated a Planetary Protection Policy with associated requirements.

The Policy and its associated requirements, is not legally binding under international law but it is the only internationally agreed planetary protection standard with implementation guidelines for reference in compliance with Article IX of the United Nations Outer Space Treaty of 1967. States Parties to the Outer Space Treaty are responsible for national space activities under Article VI, including the activities of governmental and non-governmental entities.

The COSPAR Panel on Planetary Protection (PPP) maintains and updates the COSPAR Policy and its associated requirements. The structure and composition of the Panel, as well as all documents related to the Panel's activities, can be found at: <https://cosparhq.cnes.fr/scientific-structure/ppp>.

The Panel reviews all available scientific knowledge through existing or commandeered studies performed by groups or committees of experts who review the information and make a recommendation to the Panel.

The main goal of COSPAR's PPP is to prevent any of the space missions to possible habitats from taking biological material from the Earth and contaminating the target planet/satellite, as well as preventing any contamination from extraterrestrial material returned to Earth if the mission is designed to acquire samples for laboratory analysis [1,2,3]. The five Categories of Planetary Protection outline the recommended measures that an agency should apply to each mission.

Recent activities of the Panel have led to updates of the Policy [4]. Workshops, dedicated scientific, technical meetings and independent peer reviews are all integral part in updating the COSPAR Planetary Protection Policy. The purpose obviously is to respond to the needs of space missions, while applying due diligence and expertise in the process [5].

Planetary protection guidelines are there to enable safe scientific space exploration for long periods of time and to ensure the protection of our planet Earth.

References: [1] Coustenis, A., Kminek, G., Hedman, N. ROOM Journal, June 2019, 44-48. [2] Coustenis, A., et al. (2019). Space Res. Today 205. [3] Fisk, L., et al. (2020) Introduction to the new COSPAR Policy on Planetary Protection and [4] COSPAR Policy on Planetary Protection. Space Res. Today 208, August 2020. [5] The COSPAR PPP (2020) Planetary Protection Policy: For sustainable space exploration and to safeguard our biosphere. Research Outreach 118, 126-129.