

IAF SPACE EXPLORATION SYMPOSIUM (A3)
Solar System Exploration (5)

Author: Ms. Alissa Haddaji
COSPAR, France, Alissa.haddaji@cosparhq.cnes.fr

Mr. Gerhard Kminek
European Space Agency (ESA), The Netherlands, gerhard.kminek@esa.int

Dr. Jean-Louis Fellous
COSPAR, France, jean-louis.fellous@cosparhq.cnes.fr

Dr. John Robert Brucato
Italy, jbrucato@arcetri.astro.it

Mrs. Diana Margheritis
Thales Alenia Space Italia, Italy, diana.margheritis@thalesaleniaspace.com

Prof. Susan McKenna-Lawlor
Space Technology (Ireland) Ltd., Ireland, stil@nuim.ie

Dr. Elke Rabbow
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, Elke.Rabbow@dlr.de

Dr. Petra Rettberg
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, petra.rettberg@dlr.de

Dr. Samuel Royle
Imperial College London, United Kingdom, s.royle@imperial.ac.uk

Prof. Mark Sephton
Imperial College London, United Kingdom, m.a.sephton@imperial.ac.uk

Dr. Hajime Yano
Japan Aerospace Exploration Agency (JAXA), Japan, yano.hajime@jaxa.jp

Mr. Nicolas Walter
European Science Foundation, France, nwalter@esf.org

Dr. Patricia Cabezas
European Science Foundation (ESF), France, pcabezas@esf.org

THE INTERNATIONAL PLANETARY PROTECTION HANDBOOK (IPPH)

Abstract

In 2016, the currently ongoing Planetary Protection of Outer Solar System (PPOSS) project was accepted for funding by the European Commission under the Horizon 2020 programme. It provides an international platform and forum where science, industry and policy actors meet, discuss and produce policy recommendations on the matter of planetary protection of outer solar system bodies. A partner in PPOSS, COSPAR is in charge of assembling and publishing an International Planetary Protection Handbook (IPPH). This handbook aims to analyse the international planetary protection landscape, delineate the state-of-the-art and identify the good practices implemented in current and past missions so as to establish them as standard practice. Through desk research, industry and science team consultations (interviews and workshops) including more than ten international partners (space agencies, universities/labs, and industry), the IPPH crystallises the global status of planetary protection implementation and rationales and makes this information available for introduction, education and training purposes.

Understanding potential hazards is essential to pursue Space Exploration. Moreover, avoiding unnecessary challenges coming from introducing unwanted forward invasive Earth contamination while searching for extra-terrestrial life is key to efficiently pursuing exploration. Used as a teaching tool in three or four International Planetary Protection training workshops in 2017-18, the handbook explains the do's and don't in planetary protection and, through five detailed case studies, provides all the information needed to understand and apply Planetary Protection requirements to a space mission. The IPPH is intended to be maintained and updated by COSPAR, based on the outcomes of the PPOSS project and future applicable research.