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

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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 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.