

Proposal of a preliminary Planetary Protection protocol for the development of future Mars missions at the University of Vigo.

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Abstract

We present here a research collaboration between the University of Vigo, ESA and INTA/CAB to analyse, adapt and test standard Planetary Protection (PP) protocols to avoid biological contamination during the development of future Mars exploration instrumentation.

This project is based on the standard PP requirements, procedures and techniques currently used for Mars science instruments, in particular for the Raman Laser Spectrometer (RLS) developed at INTA/CAB for the ESA ExoMars mission. The goal of the project is to compile, adapt and test these procedures in the current instrumentation facilities at the University of Vigo, so they could be used for the development of science payload in a potential future mission to Mars surface.

We will summarize in this contribution the standard requirements and procedures followed by ExoMars RLS team (biological contamination prevention, monitoring and cleaning methods) and how these techniques can be adapted to the University, including the preliminary study of various samples taken at the UVigo SpaceLab and CINTECX FA3 lab facilities to assess the current state of biological contamination.

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