

## **NASA's Planetary Protection Handbook for Supporting the Planetary Protection Practitioner Community**

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The newly released "NASA Planetary Protection Handbook" represents a significant update of NASA's guidance to the practitioner community on implementing planetary protection for space exploration missions. This handbook provides guidelines, considerations, and examples focused on the "how to" processes to implement NASA's planetary protection policy and technical standard requirements across a project lifecycle. Information is provided for a wide range of mission types with direction on which parts of the handbook are applicable by mission class. Key topics including mission categorization, cleanroom and operation environments, bioburden analysis, laboratory quality control, probability risk analysis (PRA), and how new methods like metagenomics can be applied for planetary protection. The approach for the new handbook has been to leverage peer-reviewed publications, industry standards and lessons learned from past missions to help make best practice approaches available to all. The handbook will be a living document with the intention to update frequently through engagement with the subject matter expert community to keep pace with new methods and approaches.

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