Space hardware for plant samples

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Abstract

This document aims to study previous and upcoming space missions that involved biological samples, to understand the hardware, procedures and aspects needed for such a mission. Additionally this document serves as a technical bridge and will try to break down some of the engineering aspects for other disciplines, as well as recommend feasibility of a similar project.

Mission idea

Who is plants for space?

Proposed mission

Previous missions

BioSentinel

AstroBio CubeSat (ABCS)

Outline of hardware

Temperature control

Heating

Cooling?

Atmospheric control

Vibration

Sensing

Imaging

Lab on a chip? or other chemical detection

Additional sensing capabilities?

Things like radiation sensors, plant health (if this can be measured), atmospheric sensing

How this mission could be achieved

Satellite (cube or share on larger sat)

ISS experiment

Bibliography

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