



Universität
Basel

Research Project

Mars Sedimentation Experiment Settling Tube Photometer Rack

Third-party funded project

Project title Mars Sedimentation Experiment Settling Tube Photometer Rack

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Organisation / Research unit

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Department

Project start 14.06.2016

Probable end 28.02.2017

Status Completed

The search for past life on Mars, such as planned for ESA's ExoMars mission, depends on understanding where traces of microorganisms living 3.5 billion years ago can be found today. Typical sites for deposition and preservation are sediments deposited by running water. Their movement is strongly affected gravity, requiring the re-calibration of models developed for Earth. MarsSedEx-STP aims at generating the required data on sediment movement in water on Mars, using the partial gravity during the Martian parabolas offered on board Novespace's A 310 during the 2nd Swiss Microgravity Campaign. The instrument used for the experiment was developed with support of the Swiss Space Centre by the Physical Geography and Environmental Change research group. It consists of a set of eight settling tubes equipped with photometers which enable the detection of settling velocities of clouds of fine sediment. Apart from applications on Mars, the technology developed for MarsSedEx-STP can be used on Earth for the rapid detection of the settling of naturally occurring sediments.

Financed by

Swiss Government (Research Cooperations)

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