

Research Project

ExoMars CLUPI Operation Testing

Third-party funded project

Project title ExoMars CLUPI Operation Testing

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Organisation / Research unit

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Department

Project Website <http://exploration.esa.int/mars/45103-rover-instruments/?fbodylongid=2301>

Project start 01.09.2017

Probable end 31.03.2021

Status Completed

CLUPI (CLOse Up Imager) is a camera system installed on ESA' ExoMars rover designed to acquire high-resolution, colour, close-up images of outcrops, rocks, soils, drill fines and drill core samples. The visual information obtained by CLUPI will be similar to what a geologist would get using a hand lens. The information will be used to identify rocks types and potential biosignatures in those rocks. Nikolaus Kuhn is part of the CLUPI science team. This allows the members of his Physical Geography and Environmental Science Research Group exclusive access to the data generated by CLUPI after the landing of ExoMars on Mars in March 2021.

The preparation of the use of CLUPI during the ExoMars mission is conducted in the framework of an extensive operations testing in the Marslabor of the University of Basel. A Flight Representative Test Model (FRTM) is provided by the Science Directorate of the European Space Agency to the CLUPI Science Team lead by Prof. Jean-Luc Josset of the Space Exploration Institute in Neuchâtel. This SRTM will be used for operation testing and mission preparation in the Marslabor of the University of Basel. The cost of CLUPI are an estimated 10 million Euro and paid by the Swiss Space Office. The SRTM provided to the Marslabor of the University of Basel costs approximately 500'000 Euro.

Keywords Mars, life, biosignatures, ExoMars, CLUPI

Financed by

University of Basel

Other sources

Add publication

Published results

4640554, Bontognali, Tomaso; Meister, Yarden; Kuhn, Brigitte; Josset, Jean-Luc; Hofmann, Beda A.; Kuhn, Nikolaus J., Identifying optimal working conditions for close-up imaging during the ExoMars rover mission, 0032-0633, Planetary and Space Science, Publication: JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

4641016, Van Kranendonk, Martin J.; Djokic, Tara; Baumgartner, Raphael; Bontognali, Thomas R. R.; Sugitani, Kenichiro; Kiyokawa, Shoichi; Walter, Malcom R., Life analog sites for Mars from ear-

ly Earth: diverse habitats from the Pilbara Craton and Mount Bruce Supergroup, Western Australia, 9780128202463, Mars Geological Enigmas: from the Late Noachian Epoch to the Present Day, Publication: Book Item (Buchkap., Lexikonartikel, jur. Kommentierung, Beiträge in Sammelbänden etc.)

4641001, Ruesch, O.; Hess, M.; Wohlfarth, K.; Heyer, T.; Wohler, C.; Bontognali, T. R. R.; Orgel, C.; Sefton-Nash, E.; Josset, J.-L.; Vago, J. L., Synthetic topography from the decameter to the centimeter scale on Mars for scientific and rover operations of the ESA-Roscosmos ExoMars mission, 0032-0633, Planetary and Space Science, Publication: JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

Add documents

Specify cooperation partners

ID	Kreditinhaber	Kooperationspartner	Institution	Laufzeit - von	Laufzeit - bis
4488520	Kuhn, Nikolaus J.	Josset, Jean-Luc	Space Exploration Institute, Neuchâtel	01.09.2017	31.12.2022
4488521	Kuhn, Nikolaus J.	Beda Hofmann	Natural History Museum Bern	01.10.2018	31.12.2022