INTERNATIONAL SPACE UNIVERSITY

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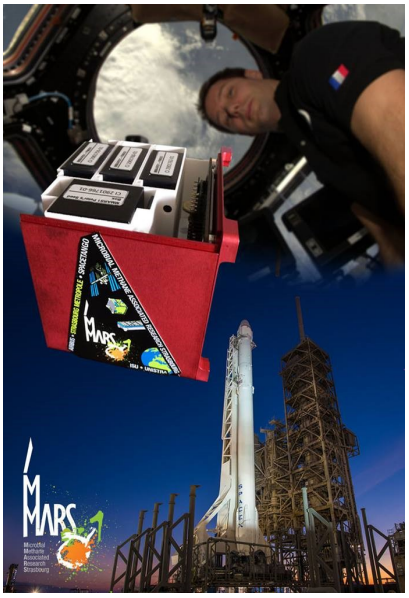
presse information press

MMARS1 - First International Space University – University of Strasbourg – Eurometropolis of Strasbourg Experiment in Space

Cape Canaveral, USA: on 19 February 2017, a Space X Falcon 9 rocket lifted off from Kennedy Space Center's historical launch pad 39A, bringing MMARS1 to space and on its way to the International Space Station.



Design by Alec Bartos ISU MSS16 - Images courtesy of NASA, ESA, and SpaceX

The experiment takes its origin in the traces of methane found on Mars. One hypothesis is that this methane could have a biological origin, such as from terrestrial methane-producing micro-organisms.
As a first step, it is therefore important to know if such micro-organisms can survive under the stress of space conditions, implying mainly reduced gravity and cosmic radiation. The MMARS1 (Microbial Methane Associated Research Strasbourg 1) experiment was designed to address this question. The required container and methane sensors were developed under ISU's responsibility, with the help of Master thesis students (see picture below), and the support of Airbus Defence & Space engineers.

Methane-producing micro-organisms could represent a crucial asset for future space missions, including for example for biomining, in terms of fuel production.

Another important feature of the MMARS1 experiment is its unique cooperation model, which combines ISU knowledge of the space environment, know-how on methane-producing micro-organisms in the group of Pr. S. Vuilleumier at University of Strasbourg (laboratory GMGM, UNISTRA-CNRS), technical expertise of Airbus Defence and Space, Friedrichshafen, and the financial support of the Eurometropolis of Strasbourg, and hence represents a genuine Public-Private-Partnership (PPP).

MMARS1 container and experiment held by ISU alumnus Yadvender Singh Dhillon (Photo: ISU)

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press information presse

Dr. N. Matt, Vice-President of Higher Education of the Eurometropolis of Strasbourg and Associate Professor at UNISTRA, stated: 'This experiment, besides its scientific importance, is an important milestone in the cooperation between both Universities in Strasbourg, clearly showing the synergy between the capabilities of both'.

Prof. Favier, Research Programs Director at ISU confirmed this statement: "This particular Space experiment, the first of its kind, clearly shows the importance and capability of our University to contribute to top level research programs. This PPP also allowed to develop and launch a complex experiment within a smart and cost effective framework."

MMARS2, a follow-up of the experiment, is already being planned and demonstrates the strong motivation of ISU in terms of research and cooperation with the scientific community at University of Strasbourg.

An event open to the general public retracing the first steps of this experiment will be webcast live from ISU on March 7, 2017, via http://www.isunet.edu/pages/video-webcast/isu-live-channel/107.

About the International Space University - www.isunet.edu

The International Space University (ISU), founded in 1987 in Massachusetts, US and now headquartered in Strasbourg, France, is the world's premier international space education institution. It is supported by major space agencies and aerospace organizations from around the world. The graduate level programs offered by ISU are dedicated to promoting international, interdisciplinary and intercultural cooperation in space activities. ISU offers the Master of Space Studies program at its Central Campus in Strasbourg. Since the summer of 1988, ISU has also conducted the highly acclaimed Space Studies Program at different host institutions in locations spanning the globe. ISU programs are delivered by over 100 ISU faculty members in concert with invited industry and agency experts from institutions around the world. Since its founding in 1987 on the campus of MIT, with Sir Arthur C. Clarke as its Founding Chancellor, more than 4,200 students from over 100 countries have graduated from ISU.

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