

MMARS1 successfully returned to Earth!

Strasbourg, France: After a one month stay on board of the International Space Station (ISS) under reduced gravity conditions and exposure to cosmic radiations, the first Strasbourg-led experiment in space returned to its base!

It was brought down under refrigerated conditions by the Dragon 10 capsule (a commercial capsule produced by Space-X), picked up, together with other samples, from the Ocean on 19th March 2017, then shipped by airplane to Strasbourg where the experiment arrived just one week after leaving the Space Station.

The MMARS1 experiment is the first of an ambitious program to study under which conditions methanogenic Archaea, which are primitive micro-organisms producing methane, may survive and develop in space, thus providing some insight on the potential existence of methane-producing lifeforms on Mars.

The experiment was disassembled in the laboratory of GMGM CNRS microbiology research unit at University of Strasbourg by specialists from Airbus Defence & Space and International Space University (ISU) engineers and students. The first results showed that the "Cube" hardware, including chambers for microbial growth and onboard computer, survived the harsh space environment. The temperature in the chambers was monitored for the entire duration of the MMARS1 experiment trip, from the time it left the lab on January 30 for Cape Canaveral and the Falcon 9 launch to the ISS on 19th February. Tests are now taking place to measure the growth and methane produced by the micro-organisms sent on the ISS during their time in space.

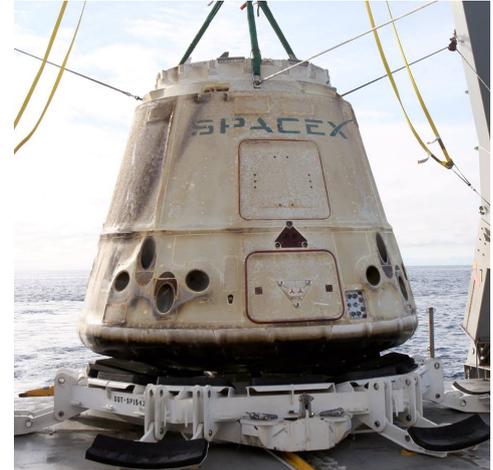
Prof. Favier of ISU, responsible for the experiment stated:

"As for any space experiment we are implementing the principle of incremental approaches. This means MMARS2, the next experiment we are already working on, will take into account the results of the previous one. The first step has been reached successfully and we know now how to implement an even more sophisticated experiment to get more quantitative answers on this topic".

Prof. Vuilleumier, responsible for the microbial culture sent to space, added:

"This may be the first time that methanogens are sent to space. We are very excited about this unique opportunity to begin to investigate how key terrestrial lifeforms develop in the harsh space environment!"

Dr. Nicolas Matt, Vice President of the Eurometropolis of Strasbourg, on his side reinforced this:



Space X Dragon 10 capsule after splashdown in the Pacific Ocean, 19th March 2017.

“With amongst others the great support of Groupama Grand Est as a sponsor, we are now able to start preparing the second instalment of this experiment. It has also been clear that the presence of integration facilities in Strasbourg premises of ISU, such as a clean room, will represent an important asset for the next steps of this exciting journey”.

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.