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# PRELIMINARY RESULTS OF THE SELF DEPLOYABLE HABITAT FOR EXTREME ENVIRONMENTS (SHEE) TESTING CAMPAIGN.

**Abstract**

This paper presents preliminary results of the qualification and testing campaign for the Self Deployable Habitat for Extreme Environments (SHEE). Developed under a three year European Commission FP7 grant, the SHEE is a rigid segment deployable habitat test bed designed for use in space analogous environments.

The objective of the SHEE project is to develop a self-deployable habitat test bed that will support a crew of two for a period of up to two weeks in duration. During this time the habitat will provide for all of the environmental, hygiene, dietary, logistical, professional, and psychological needs of the crew. Unlike most space analog habitats, the SHEE will use commercial transportation infrastructure, allowing for cost effective transportation to space analog sites across Europe. Once on site, the habitat will be autonomously deployed with no human intervention required, and will be able to re-pack itself with minimal human assistance.

Qualification and testing of the fully outfitted SHEE test-bed began in May of 2015 at Compagnie Maritime D Expertises in Marseille, and will conclude in October of 2015 at the International Space University in Strasbourg. The testing campaign has included a shake-down of all subsystems, thermal analysis, stress analysis, a habitability study, acoustic tests and more...

At the conclusion of the project in December of 2015, the SHEE will be made available to the European scientific community for analog space simulations. The first field deployment of the SHEE will occur in 2016 as part of the Moonwalk FP7 campaign in Rio Tinto, Spain. It is anticipated that elements of the SHEE design will find practical applications in any hostile environment requiring an extended human presence, on or off the Earth.