

Bristol research trio to experience 'life on Mars'

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Ashley Dale

The future of space exploration will be placed in the hands of three engineers and scientists from the University of Bristol when they embark on a special expedition to experience life on Mars.

Aerospace engineering PhD student Ashley Dale is leading the six-strong team, who were selected to spend two weeks at the Mars Desert Research Station (MDRS) in the high-altitude Utah desert - one of the most Mars-like environments on Earth.

During their mission, which takes place from 18 January to 1 February 2014, under constant observation they will be subjected to psychological, protocol and food studies conducted by groups around the world to help

prepare explorers for a future mission to the Red Planet. They will also carry out research into a myriad of new technologies, mostly developed at NASA, the European Space Agency and the Canadian Space Agency.

Among the exciting challenges faced by the team is the field-testing of the Canadian Space Agency's Artemis Jr., a 270kg lunar rover scheduled for launch to the Moon in 2018.

They'll also test ultrasonic spacesuit gloves which feed calibrated information to the user's fingers to give a sense of texture and temperature, allowing better awareness of the environment around them.

In addition to Ashley, the team includes Bristol University PhD students Michaela Musilova and Sue Ann Seah who have expertise in astrobiology and spacesuit design engineering.

Completing the team is Dr Susan Jewell, a British television presenter and scientist based in the US; Ewan Reid, a robotics engineer at Neptec, a spaceflight engineering company in Canada; and Vibha Srivastava, an aeronautical engineer from Hindustan Aeronautics Ltd in Bangalore.



The Mars Desert Research Station, in the high-altitude desert of Utah

All outdoor exploration will be conducted wearing a new generation of analogue spacesuits with air supply packs, while the crew lives together in a small Habitat Module with limited amounts of electricity, food, oxygen and water.

Ashley, who was sponsored by the UK Space Agency to participate in a crash-course of the Space Program at the International Space University over the summer and has previously carried out an expedition at the MDRS, said: "It's going to be as close to the reality of spending time on Mars as possible. We'll be the subject of various studies looking at how we cope psychologically and physically while also seeing how various technologies fare in the high-altitude desert of Utah.

"It's extremely exciting to be working with experts from around the world to help shape the future of [space exploration](#). I formed this crew to open opportunities for the UK to get more involved in this sort of pioneering work. A big part of our expedition is communicating our work with people around the world. A film documentary of the expedition will be made, we'll be hosting live video classes with schools via Skype and will also be giving public lectures on our return."

Provided by University of Bristol

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