

European space travellers pushed to limit in Mars experiment

By Benedikt von Imhoff Sep 25, 2011, 2:06 GMT

Moscow/Cologne - Almost 18 months of isolation have taken their toll on the participants in the ambitious Mars500 space experiment, currently underway in Moscow.

'Psychologically drained,' is the general view as the experiment, in which the astronauts have spent a record time in isolation, nears its end. It still has another six weeks to go.

'These men want to see their families again and the sun at last,' Peter Graef of the German Aerospace Centre (DLR) - which participates in the project - told the German Press Agency dpa in a telephone interview from the DLR headquarters in Cologne.

The six participants from Russia, China, Italy and France have to hold out until November 4, when their spaceship 'lands' again on the [Earth](#) after 520 days in simulated interplanetary flight.

The team members enjoy even the smallest changes in their monotonous environment. 'It's two degrees warmer,' Italian participant Diego Urbina exulted recently in sending a Tweet.

The team faces its next challenge soon, when it will once again be able to communicate in real time with the guidance team outside.

A real flight to the [Red Planet](#) would mean communication delays of up to 20 minutes before a message from the crew arrived at ground control. That is the time a signal travelling at the speed of light would take from Mars, which is about 200 times further from the [Earth](#) than the moon is, on average.

'Direct communication naturally means a huge improvement in the quality of life,' Graef says. 'It will certainly make the last month easier.'

Urbina and his five co-spacemen have been sitting in a container in Moscow since early June 2010, with cameras observing almost every corner, apart from the small private rooms and the lavatories.

Mars500 is almost a scientific version of the Big Brother television show, but without the microphones.

Numerous tests enlivened the daily grind in the initial phases of the experiment, but the daily round has long since become routine.

'They know everything back-to-front,' Graef says - and the longing for life outside is growing.

'I miss my family very much and my friends,' Urbina writes. But that is not all.

'Very simple things like seeing the blue sky or going out dancing in the evenings. I love that, but I can't do things like that in here.'

However, 'Ground Control' is certain that the 'Martians' will hold out to the end. The participants could have called a halt to the experiment at any time if they had wished.

'The men have not seen the sun for a long time and are very pale,' Graef says. 'But the team is

highly motivated and working superbly.'

Creativity is what is required. 'The crew have to turn lots of banal things into important experiences,' is how Graef describes the challenge.

This final phase is also important for the team outside. What would space travellers en route to Mars on a real flight need to take along? How should they be guided by those behind on Earth?

There is no shortage of time for the Mars500 team to consider the answers, as the first flight to the [Red Planet](#) is unlikely to take place for decades.

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