

# Researchers complete 520-day mock mission to Mars

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In this May 24, 2010 file photo released by Moscow's Institute for Medical and Biological Problems and made available Wednesday, June 2, 2010, researchers test spacesuits on a simulated Mars surface during a training session at Moscow's Institute for Medical and Biological Problems. The all-male crew of three Russians, a Frenchman, an Italian-Colombian and a Chinese have stayed at the facility at a Moscow space research center since June 2010 to simulate confinement, stress and fatigue of interplanetary travel minus the weightlessness. They are set to leave their quarters Friday, Nov. 4, 2011. (AP Photo/IBMP, Oleg Voloshin, HO File)

(AP) -- Pale but smiling, an international crew of researchers on Friday

walked out of a set of windowless modules after a grueling 520-day simulation of a flight to Mars.

The all-male crew of three Russians, a Frenchman, an Italian-Colombian and a Chinese slowly emerged from the western Moscow facility, which simulated the confinement, stress and fatigue of [interplanetary travel](#) - minus the [weightlessness](#). Dressed in blue track suits emblazoned with the mission emblem, they carefully walked down a metal ladder to a greeting crowd of officials and journalists.

"The crew has completed the experiment," team leader Alexey Sitev reported to Russian [space](#) officials. "The mission is accomplished, the crew is in good health and is ready for new missions."

Psychologists said long confinement without daylight and fresh air put the team members under stress as they grow increasingly tired of each other's company. They said that [psychological conditions](#) can even be more challenging on a mock mission than a real flight because the crew won't experience any of the [euphoria](#) or dangers of actual space travel.

Despite that, the crew showed no sign of stress as they walked to microphones to speak before cameras. "We hope that we can help in designing the future missions to Mars," Frenchman Romain Charles said with a smile.

His Italian-Colombian crewmate Diego Urbina said the crew felt proud to achieve the longest-ever imitation of [space flight](#), so that "humankind can one day greet a new dawn on the surface of distant but reachable planet."

The facility at Moscow's Institute for Medical and Biological Problems, Russia's premiere space medicine center, includes living compartments the size of a bus, connected with several other similarly-sized modules

for experiments and exercise.

During the experiment, the crew communicated with the organizers and their families via the Internet, which was delayed and occasionally disrupted to imitate the effects of [space travel](#). They ate canned food similar to that offered on the International Space Station.

Midway through the mission, the crew even conducted a mock Mars landing, venturing from their cramped quarters in heavy space suits to trudge into a sand-covered room and plant flags of Russia, China and the European Space Agency on a simulated Red Planet. They also took "samples" from the ground and conducted faux scientific experiments.

The organizers said each crew member will be paid about \$100,000, except the Chinese researcher whose reward hasn't been revealed by Chinese officials.

The crew will spend three days in quarantine to minimize the risk of infection before holding a press conference. Sitev, who led the team into the quarters just a few weeks after getting married, said he dreams about going to the seaside.

"I want to go somewhere to the warm sea as we have missed two summers here," he said in remarks carried by RIA Novosti news agency shortly before wrapping up the mission. "My thoughts are drifting toward swimming at sea and basking on warm sand."

Urbina told RIA Novosti that he would also like to have a vacation in the Caribbean and would spend the money he earned on a sports car and a pilot training course.

The organizers said they had considered some female candidates for the experiment, but left them out for various reasons. They denied that they

deliberately had formed an all-man crew because of the failure of a similar simulation in the past.

The 1999-2000 experiment ended in acrimony after a Canadian woman complained of being forcibly kissed by a Russian team captain following a fist fight between two Russian crew members that left blood splattered on the walls. Russian officials downplayed the incidents, attributing them to cultural gaps and stress.

A real flight to Mars is decades away because of huge costs and massive technological challenges, particularly the task of creating a compact and relatively lightweight shield that will protect the [crew](#) from deadly space radiation.

NASA is aiming for a nearby asteroid around 2025 and then on to Mars in the 2030s.

Vitaly Davydov, a deputy head of the Russian space agency, said the experiment completed Friday will help pave the way for a real [Mars](#) mission. He added that it's not expected until mid-2030s and should be done in close international cooperation.

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