

NASA Tests Identical Twins for Deep-space Travel

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Mark Kelly (left), Scott Kelly (right) Photo: NASA

NASA prepares the only identical twins-astronauts in the world, for tests on human body behavior during a three year trip to Mars.

(Newswire.net -- January 26, 2015) -- Brothers Mark and Scott Kelly, are the only identical twins-astronauts amongst 2.25 million twins living in the United States. The Kelly brothers have 'become

a key to figuring out how to prepare for and protect the human body during lengthy trips in space,' reports CBS News correspondent Don Dahler.

Identical twins, which are actually nearly identical, are the perfect subjects for exploring human body changes after prolonged time in space.

"People do really well on space missions, but it's the physiological, the medical stuff, the stuff like radiation, loss of bone mass and muscle mass and density," Scott said. "It's those things that we need to figure out."

It was not clear if they drew a straw to see who will spent time on International Space Station and who will remain as a reference in the base here on Earth, but Mark was chosen to stay.

"I'm in the laboratory on Earth," Mark said. "I'm in the MRI machine tomorrow for like four hours I think."

Scientists will measure the physical and medical changes of the brother in space and compare it with the brother that stays on earth.

"Having Mark as the control subject is really very fortunate. Not only because we're twins, but he's also a former astronaut and NASA has data on him going back to 1995," Scott said.

The only thing that might confuse the data is the possibility of yet unexplained condition that happens to one identical twin, which is reflecting the other. The scientists, however, believe it is highly unlikely any of that 'transferred' state is going to occur.

When spending a long time without gravity, the human body suffers serious changes. Bones get fragile, loss of the muscle mass occurs, the heart weakens, and eyes lose their shape. While both have made previous trips, Mark said Scott holds the record for most time in space.

"Scott logged two flights on the space shuttle and then a six month flight on the space station," Mark said. "I did four flights on the space shuttle. So I have 54 days in space and I think [he's] over 180."

Reportedly, the tests results are going to provide, not only more precise information on changes to the human body during prolonged zero gravity conditions, but also ways to prepare the next generation of deep space astronauts for the three year long trip to Mars.

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