

The Identical Astronaut Experiment

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Identical twins Mark and Scott Kelly share more than looks. For 15 years, they shared the same job—astronaut.

Both have a great deal of experience in space. But one of them—Scott—will be spending a whole lot more time there come March 2015. He will be the first American astronaut to spend a year at the International Space Station. Most astronauts stay at the space station for no more than six months.

The goal of the mission will be to see what living in space for a long period of time does to a human. This kind of information is very important. If we are ever to send a person to a faraway place like Mars, we would need to know how to keep astronauts safe and healthy in space for long stretches of time.

When Scott was selected to be part of this historic mission, the brothers had a thought. They realized that even though only one of them was going back into space, they were uniquely qualified to act as a human experiment together.

In most experiments, scientists like to compare the thing they are experimenting on with something that is not being changed at all. But it's hard to compare one human to another. Any differences in results could simply be due to the fact that they are two different people.

But the Kelly brothers are identical twins. They are, biologically speaking, copies of each other. Any differences in their health during the experiment are likely because of the fact that one is in space. Comparing the two of them throughout the year will allow scientists a clear picture of what living in space for a long time can do to you.

Mark and Scott are so excited for this opportunity that they are asking scientists from all over the world for ideas for experiments to perform on them.

What kind of experiment would you perform if you had a twin in space?

What would you bring with you on a long trip to Mars? Find out how hard it is to make these tough decisions at NASA's Space Place: <http://spaceplace.nasa.gov/mars-adventure/>.



Twin astronauts Mark Kelly (Left) and Scott Kelly (Right). Credit: NASA.

Editors download photos here:

Mark: <http://spaceflight.nasa.gov/gallery/images/shuttle/sts-121/hires/jsc2005e20603.jpg>

Scott: <http://spaceflight.nasa.gov/gallery/images/shuttle/sts-118/hires/s99-05705.jpg>