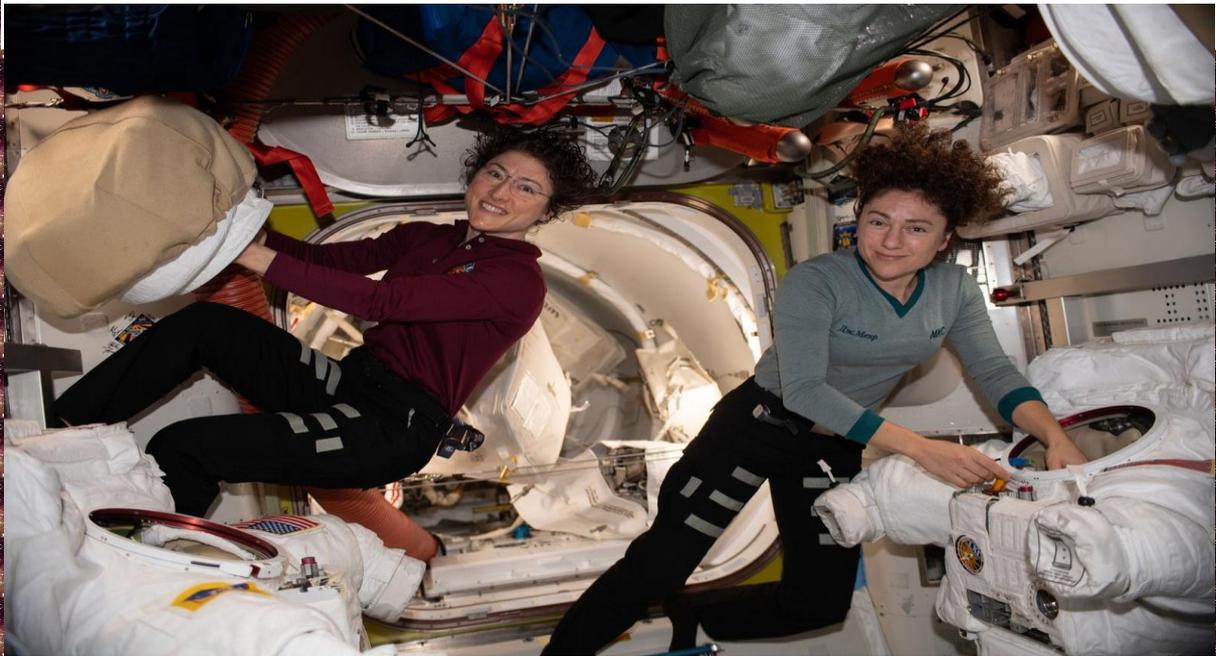
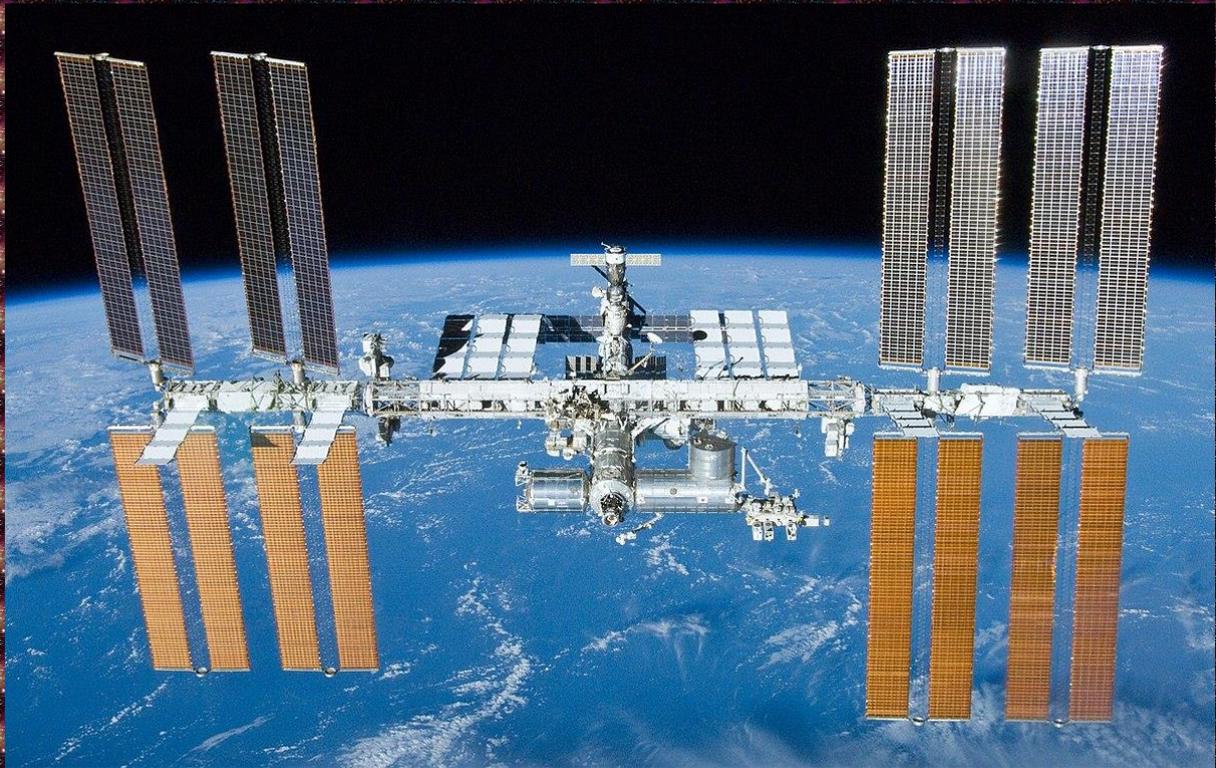


# NASA's astronauts make "herstory" on first all-female spacewalk

Two NASA astronauts made history, going out on the first all-female spacewalk on October 18<sup>th</sup> 2019. In the entire history of humans in space, this was spacewalk number 421. Men have been on every one of the 420 previous spacewalks.



Astronauts Christina Koch and Jessica Meir made what NASA called "HERstory," (instead of history) when they went out the Quest hatch of the International Space Station to fix a broken battery charger. All four men aboard the International Space Station stayed inside for the seven hour mission. The battery charger failed after Koch and a male crewmate installed new batteries outside the space station the week before.



Picture of the International Space Station.

Russia holds claim to the first spacewalk — in 1965 — and also the first spacewalk by a woman — Svetlana Savitskaya — in 1984. The US trailed by a few months in each instance.

Before Koch and Meir's walk, men dominated the spacewalking field, 213 men had completed a spacewalk and only 14 women had the same experience.

Meir, a marine biologist who arrived at the International Space Station in September of 2019, is the 15th female spacewalker. Koch, an electrical engineer, had already completed three spacewalks and was seven months into an 11-month space mission that will be the longest by a woman.

NASA planned the first all-female space walk in March of 2019, but had to call it off because of a shortage of medium-size suits. Koch has since built a second medium-sized suit.

Though it's called a spacewalk — which makes it sound like a leisurely stroll in a park — it's really more of a crawl around the outside surface of the space station with a lot of work to do while they're out there and is widely considered the most dangerous assignment in orbit.

Koch and Meir insisted they were just doing their job after years of training, following in the footsteps of women who paved the way.

### Facts about space

- 1) One million Earths could fit inside the sun - and the sun is considered an average-size star.
- 2) For years it was believed that Earth was the only planet in our solar system with liquid water. More recently, NASA revealed its strongest evidence yet that there is intermittent running water on Mars, too!
- 3) Comets are leftovers from the creation of our solar system about 4.5 billion years ago - they consist of sand, ice and carbon dioxide.
- 4) You wouldn't be able to walk on Jupiter, Saturn, Uranus or Neptune because they have no solid surface!
- 5) If you could fly a plane to Pluto, the trip would take more than 800 years!
- 6) Space junk is any human-made object orbiting Earth that no longer serves a useful purpose. Scientists estimate there are about 500,000 pieces of space junk today, including fragments from

rockets and satellites, and everyday items like spanners dropped during construction of the International Space Station!

7) An asteroid about the size of a car enters Earth's atmosphere roughly once a year - but it burns up before it reaches us. Phew!

8) The highest mountain known to man is on an asteroid called Vesta. Measuring a whopping 22km in height, it is three times as tall as Mount Everest!

9) There are more stars in the universe than grains of sand on all the beaches on Earth. That's at least a billion trillion!

10) The sunset on Mars appears blue.



**Questions:**

1. How many spacewalks had there been altogether by October 2019?

2. What mission did Koch and Meir have to complete?
3. How long did the mission take?
4. Why do you think men have dominated spacewalking over the years?
5. How many earths could fit inside the moon?
6. Why do you think the sunset appears blue on mars (the red planet), and red on earth?