ESA astronaut Luca Parmitano prepares for launch!



Luca Parmitano's Beyond mission

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Not many of us get to go into space even once, but right now ESA astronaut Luca Parmitano is preparing for his second mission to the International Space Station! Luca will blast off from Earth inside a Soyuz spacecraft on 20 July 2019 – the 50th anniversary of the first people setting foot on the Moon.

His mission is called Beyond, and will see Luca conduct experiments to help keep humans safe on longer missions exploring space. He will also develop technology and knowledge that will allow humans, together with robots, to explore the Moon and Mars. "What we do in orbit is not just for the astronauts or for the International Space Station programme, it is for everybody," Luca explains, "It is for Earth, it is for humankind, and it is the only path for us to learn what we need in terms of science and technology in order to go beyond."



ESA astronaut Luca Parmitano will be the Space Station commander! Copyright: ESA

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The Beyond mission has a colourful logo that represents many parts of the adventure. Looking at the logo, can you see an astronaut peering out into space through a helmet visor, with reflections of Earth and the International Space Station? In the distance, the Moon is ready for humankind's return, which will take place using the Orion spacecraft and advanced rovers. Beyond is Mars, the Red Planet, currently being studied by satellites such as ExoMars, Mars Express and, one day, by humans!

As well as his science duties, Luca will also serve as Space Station commander during the second half of his mission. This is a real honour! It is the third time a European astronaut has been in charge, but the first time this duty falls to an Italian. Luca will have an excellent team with him, including NASA's Andrew Morgan, and Alexander Skvortsov from the Russian space agency Roscosmos, who will be travelling to the International Space Station with Luca.



Luca (on the right) with his crewmates, preparing for their mission, at the Gagarin Cosmonaut Training Center near Moscow. Copyright: ESA - S. Corvaja

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Although Luca is a veteran of space exploration, he has still been training intensively at NASA's Johnson Space Center in Houston, at Star City near Moscow, and at the European Astronaut Centre in Cologne. He has been busy running simulations on the Soyuz spacecraft, and familiarising himself with the experiments he will conduct while in orbit. Many of these will take place onboard the Columbus module of the International Space Station, ESA's laboratory in space. This module is home to experiments on astrobiology, microbiology, and psychology, to name just a few!



Luca has been into space before, and is an experienced astronaut. Copyright: ESA/NASA

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You can keep up-to-date with Luca's preparations for his Beyond mission on a special website: http://lucaparmitano.esa.int/

Cool fact: During a spacewalk on his previous mission, Luca's spacesuit malfunctioned and water began to collect inside his helmet. Luca stayed calm and got back to the airlock safely!

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Living in space

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Spacewalks
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Weak muscles
Bed rest
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