**Intense ‘Beyond’ mission for Luca**

On the 6th of February, Italian ESA astronaut Luca Parmitano will return to Earth after his second long-duration mission on the International Space Station (ISS). Known as “Beyond”, Luca’s mission started on 20 July 2019 when he and his colleagues launched to the ISS in a Soyuz spacecraft, exactly 50 years after the first person set foot on the surface of the Moon. During Beyond, Luca controlled a rover from orbit, made several complex spacewalks to repair the AMS-02 instrument and conducted many experiments. He was also the third European commander of the ISS.

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| 10:00:00 | ESA leader |
| 10:00:10 | Title: **Intense ‘Beyond’ Mission for Luca** |
| * EXT. Apollo 11 moonwalk\_Neill Armstrong – 21/07/1969 – Moon – NASA * INT. Luca and crewmates in front of Soyuz capsule – Baikonur, Kazachstan – Summer 2019 – ESA * EXT. Soyuz launch with Luca Parmitano – Baikonur, Kazachstan – 21/07/2019 – Roscosmos (2 shots) | On the 20th of July 2019, exactly 50 years after Neil Armstrong became the first man to set foot on the Moon, Italian ESA astronaut Luca Parmitano took off from Baikonur in a Soyuz for his second long duration stay on board the International Space Station. |
| 10:00:30:03   * INT. Luca working – Exp 60 -61, ISS – ESA/NASA (3shots) * INT. Hangar with Analog-1 rover – Valkenburg, The Netherlands – Autumn 2019 – ESA (2shots) * INT. Luca controlling Analog-1 from ISS, ISS – ESA/NASA * INT. Hangar with Analog-1 rover – Valkenburg, The Netherlands – Autumn 2019 – ESA (4shots) * INT. Luca controlling Analog-1 from ISS, ISS – ESA/NASA * INT. Hangar with Analog-1 rover – Valkenburg, The Netherlands – Autumn 2019 – ESA (4shots) * ANIMATION – Lunar rover – 2019 - ESA | Throughout his ‘Beyond’ mission Luca worked on a number of experiments and technology demonstrations.  One of these experiments was performed with the Analog-1 rover. While orbiting Earth at 28 800 km/h aboard the ISS, Luca successfully took control of the rover back on earth in the Netherlands. He expertly drove it to three sites and used the robotic arm to collect various rock samples, as guided by scientists. This innovative rover uses force feedback so the astronaut has a better feel for the motion the robot makes. Remote control and interaction between robots and human will be vital to the future of space exploration. |
| 10:01:20:08   * INT. Change of command to Luca Parmitano – ISS – 2/10/19 – ESA * INT. Houston Control room live video link for COP25 – Houston, Texas – ESA/NASA * INT. Luca live call to COP25 from ISS – ISS – ESA/NASA * EXT. Earth as seen from ISS – ESA * EXT. Hurricane Dorian as seen from ISS - ESA | Luca Parmitano also became the third European commander of the ISS. A small ceremony on the 2nd of October marked this change of command.  As commander, Luca Parmitano made a live call from the ISS to the United Nations Climate Change Conference, COP 25, in Madrid, Spain. He described the profound experience of seeing Earth from orbit and spoke about the need to protect our beautiful planet as he encouraged world leaders to take urgent steps to combat climate change. |
| **10:01:56:16**   * INT. Luca live call to COP25 from ISS – ISS – ESA/NASA | **LUCA PARMITANO – ESA ASTRONAUT**  In the six years that have passed since I was here the first time and this year, I have seen with my own eyes the effects, the terrible effects of climate change. And so, I hope that my words can bring some strength, some human strength, some human feelings to the somewhat hard to understand data that can feel cold to the eyes of the common person. |
| 10:02:26:24   * INT. Nobel prize winners call to ISS – Stockholm, Sweden – ESA * INT. Luca live call to Nobel prize winners – ISS – ESA/NASA * INT. Nobel prize winners call to ISS – Stockholm, Sweden – ESA (2shots) * EXT. Luca Parmitano spacewalk to repair AMS – exterior ISS – Nov 2019 - ESA/NASA * Still. ALS exterior ISS – unknown date – ESA (3 shots) * EXT. Luca Parmitano spacewalk to repair AMS – exterior ISS – Nov 2019 - ESA/NASA (6 shots) * INT. ISS airlock Luca with helmet full of water – ISS - 2013 – ESA/NASA * EXT. Luca Parmitano spacewalk to repair AMS – exterior ISS – Nov 2019 - ESA/NASA | Together with NASA flight Engineer Jessica Meir, Luca also made a call from the Space Station to the Nobel price laureates for physics, including those who discovered the first Exoplanet, a couple of days before ESA’s exoplanet hunter Cheops launched from Kourou.  During his stay on the International Space Station Luca Parmitano also performed four spacewalks to repair AMS, the Alpha Magnetic Spectrometer instrument mounted outside ISS. This sub-atomic particle detector looks for dark matter, antimatter and cosmic rays.  The AMS spacewalks were some of the most complicated EVAs ever, as the instrument is difficult to reach and was never designed to be maintained in orbit. A daunting task and a true engineering challenge – particularly considering the critical situation Luca experienced during his previous mission when his helmet filled up with water during a spacewalk. However, this time all EVAs went according to plan. |
| 10:03:39:08   * INT. ISS after EVA removing space suits – Nov 2019 – ESA/NASA | **LUCA PARMITANO – ESA ASTRONAUT**  Congratulations to all those that worked to achieve these EVAs at the point of the Earth.//…. Unintelligible // Thank you so much to everybody.  **Ground Control**  Thanks Luca, great words the team appreciates that. |
| 10:04:02:14   * EXT. Progress capsule approaching ISS – December 2019 – ESA/NASA (2shots) * EXT. Dragon capsule docked to ISS – unknown date – ESA/NASA * INT. ISS Luca EVA debrief – 2020 – ESA/NASA * EXT. Luca Parmitano spacewalk to repair AMS – exterior ISS – Nov 2019 - ESA/NASA * INT. ISS after EVA removing space suits – Nov 2019 – ESA/NASA | In December, Luca welcomed both a Dragon and a Progress resupply vehicle to the ISS. Both capsules docked within two days, making for a busy time on board.  With this long duration mission, Luca and ESA gained even more expertise on human spaceflight. This knowledge will feed into the next phase of space exploration. |
| **10:04:37:09** | **B-ROLL** |
| * EXT. Soyuz launch with Luca Parmitano – Baikonur, Kazachstan – 21/07/2019 – Roscosmos * INT.Soyuz capsule – Roscosmos * EXT. Soyuz approach and docking to ISS – Roscosmos, ESA, NASA | **Soyuz launch and docking**  **Luca Parmitano Beyond Mission**  **Roscosmos** |
| 10:07:04:08  EXT. Luca Parmitano spacewalk to repair AMS – exterior ISS – 25/01/2020 - ESA/NASA | **EVA 64 - AMS repair**  **Luca Parmitano + Andrew Morgan**  **25 January 2020**  **ESA/NASA** |
| 10:11:14:21   * INT. Luca live call to COP25 from ISS – ISS –11/12/2019- ESA/NASA | **Luca Parmitano live call from ISS to COP25**  **11/12/2019**  **ESA/NASA** |
| 10:17:19:07   * INT. Luca Parmitano onboard ISS – ISS –2019-2020 - ESA/NASA | **GV’s Luca Parmitano Beyond**  **Exp 60-61**  **ESA/NASA** |
| **10:23:14:19** | **ESA CREDITS** |
| **10:23:19:09** | **END** |