On the 7th of February 2008 Space shuttle Atlantis launched to the International Space Station ISS. In its cargo bay, ESA’s laboratory module Columbus. Now for a decade Columbus has been part of the ISS. It is the place where ESA astronauts have done countless experiments in microgravity and it scientific importance of the module can hardly be overstated. This A&B roll looks back at Columbus on orbit. It includes an interview with Leopold Eyharts, the ESA astronaut who was the first to work inside Columbus.

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| Image | Text |
| **10:00:00:00** | **TITLE: Columbus 10 years on orbit** |
| 10:00:10:00   * EXT. STS-122 Launch, Kennedy Space Center, FL, USA – 07/02/2008 – NASA (3 shots) * INT. NASA Facilities, Kennedy Space Center, FL, USA – Jan. 2008 – NASA (3 shots) * EXT. STS-122 on Launchpad, Kennedy Space Center, FL, USA – 07/02/2008 – NASA (3 shots) * EXT. Unloading and attachmentof Columbus to the ISS, ISS Space – Feb. 2008 – ESA/NASA (7 shots) * EXT. STS-122 crew, Kennedy Space Center, FL, USA – 07/02/2008 – NASA (1 shot) * EXT. Hans Schlegel EVA, ISS Space – Feb. 2008 – ESA/NASA (1 shot) * INT. L. Eyharts and other crew unloading and attachmentof Columbus to the ISS, ISS Space – Feb. 2008 – ESA/NASA (1 shot) | AUDIO FROM THE SHUTTLE LAUNCH  Ten years ago, on February 7th 2008, ESA’s Laboratory Columbus was launched to the ISS. It was carried by the Space shuttle Atlantis. During the 13 day shuttle mission the European laboratory was secured to the ISS’s Harmony module and activated. The laboratory is ESA’s largest contribution to the space station and the first permanent European research facility on orbit. Among the shuttle crew were ESA astronauts Hans Schlegel and Léopold Eyharts. |
| 10:00:52:21   * INT. L. Eyharts and other crew unloading and attachmentof Columbus to the ISS, ISS Space – Feb. 2008 – ESA/NASA (1 shot) * INT. L. Eyharts at Columbus mock-up, EAC, Cologne, Germany – Dec. 2017– Euronews (1 shot) * **ITW.** L. Eyharts at Columbus mock-up, EAC, Cologne, Germany – Dec. 2017– Euronews (1 shot) | **ITW Léopold Eyharts, ESA Astronaut, ESA**  I was lucky to be part of this mission and to be the first European astronaut to get into Columbus and to turn on the lights //  So the initial work was to make sure that everything was working well. So the core systems of the module of course and then we started also to work with the scientific facilities to make sure that they were also working well. Before we started the real scientific work. |
| 10:01:16:22   * Animation. Interior of Columbus – Unknown date – ESA (1 shot) * INT. Columbus interior, ISS Space – 2015 – ESA/NASA (1 shot) * INT. A. Gerst working in Columbus, ISS Space – 2015 – ESA/NASA (2 shots) * INT. P. Nespoli working in Columbus, ISS Space – 2017 – ESA/NASA (1 shot) * INT. Lettuce harvest by P. Winston , ISS Space – Feb. 2017 – ESA/NASA (1 shot) * EXT. External payload Facility Coulumbus Expose-E experiment, ISS Space – Unknown date –ESA/NASA (1 shot) * INT. ESTEC Illustrations of Expose-E experiment, Noordwijk, NL – unknown date – ESA (2 shots) * INT. André Kuipers experiment in Columbus, ISS Space – 2011 – ESA/NASA (2 shots) * INT. Thomas Reiter experiment in Columbus, ISS Space – 2007 – ESA/NASA (2 shots) | The state-of-the-art Laboratory is almost 7 metres long and 4,5 metres in diameter. It has no less than 10 racks to accommodate scientific equipment. They were specially designed to optimize the 75 cubic meters of available space. Each rack can also host an autonomous laboratory.  In the past decade ESA astronauts have performed a multitude of scientific experiments in Columbus. Some of which gave important results, like how plant life copes in microgravity. This research could be crucial in developing food production systems for long-duration space missions. Another series of experiments have tested the resilience of several life forms when exposed to the vacuum of space for a prolonged period of time.  However one of the most commonly tested subjects on Columbus are the astronauts themselves. By analysing their blood, brains, muscle and bone structure the astronauts gather important information on the effects of prolonged spaceflight on the human body. |
| 10:02:21:01   * **ITW.** L. Eyharts at Columbus mock-up, EAC, Cologne, Germany – Dec. 2017– Euronews (1 shot) | **ITW Léopold Eyharts, ESA Astronaut, ESA**  *The International Space Station is also a very good tool for preparing the future of exploration – it can be on the medical side, on the study of the human body, but also the technology, robotics and all these kinds of things which will be used in future exploration.* |
| 10:02:38:14   * INT. ISS crew working in Columbus changing rack, ISS Space – unknown date – ESA/NASA (1 shot) * INT. A. Gerst working in Columbus Fluid Physics, ISS Space – 2015 – ESA/NASA (2 shots) * EXT. GoPro Footage External payload facility Columbus shot on EVA #31, ISS Space – 01/03/2015 – ESA/NASA * EXT. GoPro Footage External payload facility Columbus shot on EVA #30, ISS Space – 25/02/2015 – ESA/NASA * INT. P. Nespoli working in Columbus, ISS Space – 2017 – ESA/NASA (2 shots) * INT. S. Cristoforetti working in Columbus, ISS Space – 25/01/2015 – ESA/NASA (1 shot) * INT. T. Pesquet working in Columbus, ISS Space – 2017 – ESA/NASA (1 shot) * EXT. STS-132 Fly-Around ISS, ISS Space – 14/05/2010 – NASA | Columbus offers the scientific community a unique weightless environment for multidisciplinary research into material science, fluid physics and life science. In addition, an external payload facility outside of the module hosts experiments and applications in the field of space science, Earth observation and technology.  After a decade in orbit ESA’s spacelab has proven to be an important part of the ISS. In the years to come it will continue to have a significant impact on European scientific endeavour and be a home from ESA astronauts while in orbit. |
| **10:03:16:19** | **B-ROLL** |
| * **ITW.** L. Eyharts at Columbus mock-up, EAC, Cologne, Germany – Dec. 2017– Euronews (1 shot) | **Interview Léopold Eyharts, ESA Astronaut, ESA**   * **Lights on in Columbus** * **Commissioning of Columbus** * **Different laboratory racks and experiments** * **Microgravity laboratory important for future exploration** * **Future of ISS and moon station** |
| 10:08:02:04   * L. Eyharts at Columbus mock-up, EAC, Cologne, Germany – Dec. 2017– Euronews | **Léopold Eyharts Set-up 4 shots** |
| 10:09:41:18   * Columbus mock-up, EAC, Cologne, Germany – Dec. 2017– Euronews | **Interior of Columbus Mock-up at**  **European Astronauts Center 3 shots** |
| **10:10:18:22**   * INT. Columbus interior, ISS Space – 2015 – ESA/NASA (1 shot) | **Columbus at ISS tour by Tim Peake** |
| 10:12:11:11   * INT. ISS crew working in Columbus changing rack, ISS Space – unknown date – ESA/NASA | **Columbus rack change 3 shots** |
| 10:13:22:21   * Animation. Interior of Columbus – Unknown date – ESA (1 shot) | **Animation of Columbus interior and ATV approach** |
| **10:14:35:11** | **END** |