**Huginn – The space messenger**

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| Image | Text |
| 10:00:00:00* scary-creepy-crow-or-raven-sitting-on-tree-branch-during-a-full-harvest-moon-night--SBV-312730995-HD ©Storyblocks
* ravens-on-branches-in-the-moonlit-night-slo-mo-SBV-320229073-HD ©Storyblocks
* superimpose of: winter-landscape-in-mountains-at-sunset-SBV-334514089-4K + raven-flies-over-head-through-cloudy-sky-SBV-300128260-HD ©Storyblocks
* superimpose of: lovatnet-lake-beautiful-nature-norway-SBV-312127167-4K + raven-flies-over-head-through-cloudy-sky-SBV-300128260-HD ©Storyblocks
* View on earth from ISS – unknown date ©ESA/NASA
* Animated Huginn Mission patch ©ESA
 | **VO:** **Two ravens sit on Odin’s shoulders, and bring to his ears all that they hear and see. Their names are Huginn – thought- and Muninn - memory. At dawn he sends them out to fly over the whole world…** **As does the ISS looking down to our planet and its people. Huginn – ESA’s new long duration mission – will relay knowledge and thought back from space.** |
|  | **Title: Huginn – The space messenger** |
| 10:00:34:11* Establishing shots Andreas Mogensen Huginn at EAC - 31 March 2023 - EAC - Cologne, Germany ©ESA
* GV’s Andreas Mogensen Huginn training at EAC- Spacewear, Thor-Davies and general experiments - 30 March 2023 - EAC - Cologne, Germany ©ESA
* Andreas Mogensen centrifuge Training, Wirght-Patterson Air Force Base – Ohio, USA / Sept 2022 ©ESA/NASA
* GV’s Andreas Mogensen Huginn training at EAC- Spacewear, Thor-Davies and general experiments - 30 March 2023 - EAC - Cologne, Germany ©ESA
* Andreas Mogensen POGO EVA traning, Johnson Space Center – Houston, Texas, USA / Sept 2022 ©ESA/NASA
* Andreas Mogensen EVA traning Neutral Bouyancy laboratory, Johnson Space Center – Houston, Texas, USA / Sept 2022 ©ESA/NASA
* Andreas Mogensen haptics experiment -Interact Centaur at ISS - 2015 ©ESA/NASA
* Andreas Mogensen haptics experiment -Interact Centaur ground team - 2015 ©ESA
* Superimpose: View of ISS in orbit ©ESA/NASA + raven-flies-over-head-through-cloudy-sky-SBV-300128260-HD ©Storyblocks
* GV’s Andreas Mogensen Iriss Mission at ISS – 2015 ©ESA/NASA
 | **ANDREAS MOGENSEN VO:** **Huginn is my first long duration mission to the ISS and I like how symbolic the name ties into the realm of human spaceflight. When we are up there, we do experiments that are then used to improve life on earth. Much as Huginn whispering in the ear of Odin, the one-eyed allfather, we try to further the knowledge by telling others on the ground what we have learned.**  |
| 10:00:59:18* Andreas Mogensen EVA traning Neutral Bouyancy laboratory, Johnson Space Center – Houston, Texas, USA / Sept 2022 ©ESA
* GV’s Andreas Mogensen Columbus systems training – EAC, Cologne, Germany – Jan 2023 ©ESA
* GV’s EAC Facilities – EAC, Cologne Germany – okt 2021 ©ESA
 | **ANDREAS MOGENSEN VO:** **For this mission I am training at several locations including the European Astronaut Centre here in Cologne.**  |
| 10:01:06:19* Soundbites Andreas Mogensen, ESA Astronaut- 31 March 2023 - EAC - Cologne, Germany ©ESA (2shots)
 | **ANDREAS MOGENSEN INTERVIEW:**I've been doing a wide variety of things. First and foremost training of course, in particular training, uh, regarding some of the experiments that I'll be conducting onboard the space station. On top of that, I've been doing some of my medical assessments. Uh, astronauts, of course, have to be healthy and fit before we launch. And so there are a number of medical tests that we have to pass before we are given the go to launch. |
| 10:01:34:14* GV’s Dragon Crew-4 launch – Kennedy Space Center - Cape Canaveral, Florida, USA -27 april 2022 ©NASA/SpaceX (5shots)
 | **ANDREAS MOGENSEN VO:** **I will fly to the ISS as part of SpaceX Crew-7 and have been assigned the role of pilot. It is very special and an honor I am the first ESA astronaut to take on this role.**  |
| 10:01:44:20* ISS timelapse over Europe – unknown date ©ESA/NASA
* GV’s Andreas Mogensen Huginn training at EAC: Metal 3D printer, generic experiment training, Kubik experiment - 31 March 2023 - EAC - Cologne, Germany ©ESA (4shots)
* GV’s Andreas Mogensen Huginn training at EAC- Spacewear, Thor-Davies and general experiments - 30 March 2023 - EAC - Cologne, Germany ©ESA (3shots)
 | **ANDREAS MOGENSEN VO:** **Once in orbit I will perform many different experiments including 10 Danish experiments. Three of them have a lot to do with living healthy both in space and on the ground. These include the Spacewear monitor, Circadian lights and sleep in orbit experiment.** |
| 10:02:01:18* GV’s Andreas Mogensen Huginn training at EAC- Spacewear, Thor-Davies and general experiments - 30 March 2023 - EAC - Cologne, Germany ©ESA (3shots)
* Soundbites Andreas Mogensen, ESA Astronaut- 31 March 2023 - EAC - Cologne, Germany ©ESA (2shots)
* GV’s Andreas Mogensen Huginn training at EAC- Spacewear, Thor-Davies and general experiments - 30 March 2023 - EAC - Cologne, Germany ©ESA (2shots)
* Soundbites Andreas Mogensen, ESA Astronaut- 31 March 2023 - EAC - Cologne, Germany ©ESA (2shots)
 | **ANDREAS MOGENSEN INTERVIEW:**I've also been, uh, participating in what we call baseline data collection. A lot of the experiments that we do, uh, involve our own bodies as, uh, as test subjects. Uh, and what we're interested in understanding is how our bodies are impacted by the spaceflight. And so we collect baseline data prior to launch, which we can then compare with data that we collect in-flight and data that we collect post-flight. And that gives us, or that gives the scientists, uh, a way to compare or to understand how our bodies have changed due to the spaceflight. |
| 10:02:40:07* GV’s Andreas Mogensen Iriss Mission at ISS – 2015 ©ESA/NASA
* Andreas Mogensen EVA traning Neutral Bouyancy laboratory, Johnson Space Center – Houston, Texas, USA / Sept 2022 ©ESA/NASA
* GV’s Andreas Mogensen Huginn training at EAC- Spacewear, Thor-Davies and general experiments - 30 March 2023 - EAC - Cologne, Germany ©ESA
* the-beautiful-lightning-on-the-cloud-stream-background-time-lapse-SBV-335178758-4K ©Storyblocks
* pan-city-skyline-with-giant-lightning-bolt-SBV-300105498-HD ©Storyblocks
* flight-through-the-clouds-thunder-and-lightning-SBV-314790016-4K ©Storyblocks
* Andreas Mogensen Iriss Mission – THOR experiment from ISS – 2015 ©ESA/NASA/DTU Space (2shots)
* space-view-of-planet-earth-globe-moving-trough-universe-galaxy-SBV-336324741-4K ©Storyblocks
* beautiful-clouds-in-motion-timelapse-SBV-309547395-4K ©Storyblocks
* aerial-view-emission-to-atmosphere-from-industrial-pipes-smokestack-pipes-shooted-w-SBV-332059735-4K ©Storyblocks
* cloud-sky-time-lapse-cloud-moving-and-sun-light-4k-resolution-video-SBV-325404728-4K ©Storyblocks
* Illustration: Arrows + animation-of-the-planet-earth-SBV-300265609-HD ©Storyblocks
* rays-of-the-sun-make-their-way-through-the-branches-SBV-336482750-4K ©Storyblocks
* light-beams-shining-through-clouds-time-lapse-SBV-327337780-4K ©Storyblocks
* aerial-view-flying-over-the-high-mountains-in-beautiful-clouds-aerial-drone-camera--SBV-347417665-4K ©Storyblocks
* realistic-sunrise-seen-from-planet-earth-orbit-SBV-346708663-4K ©Storyblocks
* flying-over-craters-on-the-moon-SBV-338838248-4K ©Storyblocks
* GV’s Andreas Mogensen Huginn training at EAC- Spacewear, Thor-Davies and general experiments - 30 March 2023 - EAC - Cologne, Germany ©ESA
* GV’s Andreas Mogensen Huginn training at EAC: Metal 3D printer, generic experiment training, Kubik experiment - 31 March 2023 - EAC - Cologne, Germany ©ESA (2shots)
* GV’s Andreas Mogensen Huginn training at EAC- Spacewear, Thor-Davies and general experiments - 30 March 2023 - EAC - Cologne, Germany ©ESA
* View of ISS in orbit ©ESA/NASA
 | **ANDREAS MOGENSEN VO:** **Another of these experiments ties in to Nordic mythology: the Thor-Davis experiment. With Thor being the God of thunder this experiment has all to do with thunderstorms, which we still do not completely understand. We have an event camera to capture the electrostatic discharge at the top of thunderclouds and then observe how the lightning interacts with our atmosphere.Lastly there is also the Earthshine experiment, and this has everything to do with our climate, one of the biggest and most important topics in science. As sunlight hits our planet part of the heat and energy is absorbed while the rest is reflected back into space. This is called the albedo effects and is a vital parameter in understanding climate. Earthshine will try and measure the albedo of the earth by carefully observing how much of this reflected light hits the surface of the moon.** **As you see these experiments fully convey the idea of the raven Huginn relaying back what it has learned to Odin, or in this case mankind, teaching us by observing from above.**  |
| **10:03:41:15** | **ESA OUTRO** |
| **10:03:53:16** | **END** |