**ESA Preview 2020**

2020 will once more bring new and exciting missions close to home or far away. From new and innovative Telecom satellites to continuation of Copernicus Earth monitoring satellites.2020 will also see the last flight of an ESA astronaut on a Russian Soyuz and the first flight ESA’s new Vega-C from Europe’s spaceport in French Guiana where Ariane 6 is also taking shape. The second ExoMars mission will see a European rover to the red planet. And the Sun will be the goal of the ESA NASA Solar Orbiter mission.

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| 10:00:00 | ESA leader  |
| 10:00:10 | Title: **ESA PREVIEW 2020**  |
| * INT. Konnect in cleanroom at Europe Spaceport- Kourou, French Guiana – Nov/Dec 2019 – ESA (4shots)
* INT. Konnect assembly Thales-Alenia cleanroom – 2019 – Thales-Alenia Space
* Still Konnect artist impression
* Animation Eurostar Neo, Neosat platform – 2019 – Airbus Defense and Space
* Animation Spacebus Neo, Neosat platform – 2019 – Thales-Alenia Space
 | In January , Konnect a Eutelsat satellite will be launched on an Ariane 5 from Kourou. Konnect is the first Neosat Telecommunications platform with electric propulsion developed within a Public Private Partnership between ESA and industry. It comprises 2 platform lines, one with Airbus, one with Thales Alenia Space.  |
| 10:00:33* INT. Quantum in cleanroom – 2019 - Airbus Defense and Space (5 shots)
 | Towards the end of year another innovative telecom satellite will be under Ariane 5 fairing : Quantum a satellite centered on software reprogrammation which will offer in orbit reconfigurability in coverage, frequency and power, within another public-private partnership with Eutelsat. |
| 10:00:53* INT. change of command to Luca Parmitano – ISS – 2019 – ESA/NASA
* EXT. Luca Parmitano EVA – Nov 2019 -ESA/NASA
* INT. Orion capsule with ESM – Plumbrook, USA – Nov 2019- ESA (3shots)
* ANIMATION. Orion in flight – 2019 – ESA/NASA (3shots)
 | In February Luca Parmitano will return to earth, landing Kazakhstan after more than 6 months in the International space station. In the future ESA astronauts will probably fly aboard US capsules, in particular the Orion capsules part of NASA’s Artemis, return to the moon program for which ESA is developing a service module providing propulsion, oxygen and power for these future crewed capsules.. A symbolic name : Artemis being the twin sister of Apollo.  |
| 10:01:30* ANIMATION. Solar Orbiter in flight – 2019 – ESA (2shots)
 | The sun will be the goal of a joint ESA/NASA mission, Solar Orbiter, launched from Cape Canaveral in Florida. Solar orbiter will study the sun up close, give insight into its effects on our entire solar system and provide key details on the source of life on Earth. |
| 10:01:49:14* ANIMATION. Travel back from earth - videoblocks
* INT. Sentinel-6 in IAGB cleanroom, Ottobrunn, Germany – Nov 2019 – ESA (3shots)
* EXT. Ocean with sea-level Graph – 2019 - ESA
* INT. Sentinel-6 in IAGB cleanroom, Ottobrunn, Germany – Nov 2019 – ESA
* ANIMATION. Rotating globe sea surface temperature – unknown date – ESA
 | The Earth is at the heart of the European commission’s Copernicus programme. By the end of year ESA will launch Sentinel 6 in collaboration with NASA. Sentinel 6 will study the oceans and in particular sea level, a key indicator for climate change. It will continue the datasets from Topex-Poseidon and Jason ocean missions. Copernicus Sentinel satellites are key to observe and understand climate change, giving policy makers the data they need to take decisions .  |
| 10:02:23:04* ANIMATION. ExoMars rover and platform – 2019 – ESA (2shots)
* EXT. ExoMars parachute test – 2019 – ESA (2shots)
* ANIMATION.ExoMars Trace gas orbiter – 2015 – ESA
* INT. Mars rover tests – Estec, Noordwijk, The Netherlands – 2019 – ESA (2 shots)
 | Science and exploration in the summer with ExoMars. If all goes as planned, notably its parachute tests, the second ExoMars mission will launch from Baikonur While Exomars 2016 sent the Trace gas orbiter sniffing Mars atmosphere, this mission will comprise a rover with a drill and a surface platform to explore the red planet.  |
| 10:02:46:19* EXT. Vega launch of Aeolus Europe Space Port – Kourou, French Guiana – 2018 - ESA
* INT. SSMS in Cleanroom – unknown date – ESA (2shots)
* INT. Esail SAT-AIS in cleanroom – Luxspace, Luxemburg – 2019 - ESA
* Aerial. Containership – unknown date – videoblocks
* Still. SEOSAT artist impression – unknown date – ESA
* INT. Seosat in cleanroom – spain – unknown date
 | In springtime Vega will return to flight with the demonstration of a new multi satellite payload system. Among the many satellites launched: E-sail/Sat-AIS, designed for tracking maritime traffic. Then the Spanish Seosat Earth observation satellite will be sent into orbit on another Vega. |
| 10:03:09:06* ANIMATION. VEGA-C launch – 2018 - ESA
* EXT. VEGA gantry at Europe Space Port – Kourou, French Guiana – 2019 – ESA (2Shots)
 | 2020 will also see the first flight of a new and more powerful Vega launch vehicle, Vega-C. Vega-c is not only more powerful than the current Vega it is also larger allowing for larger and heavier payloads, further diversifying Europe’s launcher portfolio.  |
| 10:03:28:24* EXT. BEAP P120C firing test, Europe Spaceport – Kourou, French Guiana – 2019 – ESA
* ANIMATION. P120C booster on Vega-C and Ariane 6 – 2018 – ESA
* ANIMATION. Ariane 6 launch – 2019 – ESA (3shots)
 | Vega-C’s first stage motor will also be used for the next big step for ESA launch vehicles: Ariane 6., Europe’s new heavy launcher’s maiden flight will intensify its preparation in Europe and Kourou . ESA therefore continuing to secure its the independent access to space for Europe  |
| **10:04:01:01** | **B-Roll** |
| 10:04:01:01Konnect in cleanroom at Europe Spaceport- Kourou, French Guiana – nov/dec 2019 – ESA ( | **Konnect arrival at Europe Spaceport****Kourou, Fench-Guiana****November - December 2019****42 shots** |
| 10:07:27:04* INT. Quantum in cleanroom – 2019 - Airbus Defense and Space
 | **Quantum in cleanroom****2019****9 shots** |
| 10:08:32:21* ANIMATION. Orion in flight – 2019 – ESA/NASA
 | **Orion capsule animation****2019****5 shots** |
| 10:09:42:12* ANIMATION. ExoMars Trace gas orbiter – 2015 – ESA
 | **ExoMars 2016 orbiter and lander****Animation****2019****3 shots** |
| 10:10:27:08* ANIMATION. ExoMars rover and platform – 2019 – ESA
 | **ExoMars 2020 rover on mars****2019****13 shots** |
| 10:11:59:13* INT. change of command to Luca Parmitano – ISS – 2019 – ESA/NASA
 | **Luca Parmitano becoming ISS Commander****October 2, 2019****1 shot** |
| **10:15:50:10** | **ESA credits** |
| **10:16:00:00** | **END** |