Sentinel-5P services:

ESA’s latest Copernicus earth observation satellite SENTINEL-5P has been fueled and is now ready for launch from the Plesetsk Cosmodrome in Russia for launch. Soon the satellite will join the rest of the sentinel satellite in orbit as part of the Copernicus programme.

Sentinel-5P’s purpose is to collect data on the earth’s atmosphere and is an intermediary satellite which fills the gap between the past generation of atmospheric monitoring satellites such as Envisat and the future generation comprised of sentinel-4 and 5. The raw data of sentinel-5P will be send to the DLR -Deutsches Zentrum für Luft-und Raumfahrt— earth observation center in Oberphaffenhoven, Germany. Here the data is gathered, processed and archived. After processing the sentinel-5P data will be distributed to users worldwide.

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| Image | Text |
| 10:00:00:00- EXT. Launchpad with rockot – Plesetsk cosmodrome, Russia – unknown data – Eurockot- EXT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA- INT. EOC Building, DLR: People working - Oberpfaffenhofen, Germany – 25/09/2017 – ESA | With the Sentinel-5P satellite ready for launch, the earth observation center in Oberpfaffenhofen, Germany, prepares itself to receive the highly anticipated Sentinel-5P data. As part of the DLR, the German Space Agency, this center plays a crucial role in Sentinel-5P data processing and supports data dissemination on behalf of ESA.  |
| 10:00:32:23- EXT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA | **ITW Prof. Dr.THOMAS TRAUTMANN, Head of Remote Sensing Institute - DLR***The role of DRL at the sentinel-5 precursor mission is that we here at the earth observation center and we have a two fold task. One is the sentinel-5 precursor payload data ground system development. This is done by our colleagues from the German DLR remote sensing data centre and also the second task is to develop algorithms for the extraction of information from the spectrometer, the actual TROPOMI instrument and this is done by the remote sensing technology institute.* |
| 10:01:03:16- ANIMATION. Sentinel-5P flyby – 2017– ESA- ANIMATION. Sentinel-5P scanning + globes with tracegasses – 2017 – ESA- EXT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA- INT. EOC Building, DLR: Serverracks - Oberpfaffenhofen, Germany – 25/09/2017 – ESA- ANIMATION. Globe with NO2 and Ozone concentrations as measured by Metop– 2017– DLR | Once in orbit Sentinel-5P will gather data on trace gasses in our atmosphere, such as sulfur dioxide, formaldehyde, nitrogen dioxide and ozone. The Sentinel-5P data center in Oberpfaffenhofen will process the raw satellite data extracting base information on atmospheric composition and on concentration of trace gases.These data will then be distributed to the Copernicus services as well as to the scientific community. |
| 10:01:34:04- INT. Airbus facility near Sentinel-5P – Stevenage, UK – 20/07/2017 – ESA | **ITW pepijn veefkind – Senior Scientist KNMI**Well the data can be used for different applications, for example in the air quality forecasts, it is also used by KNMI for example for the UV forecasts and we also use it to warn the aviation for volcanic ash plumes. On top of that the data will also be used by scientists around the world to study the atmosphere and to study how man is changing the atmosphere over time. |
| 10:02:09:12- ANIMATION. Map of Europe with PPM and NO2 – 2017– DLR- EXT. Aerial City of Brussels in Smog – Brussels Belgium – 25/09/2017 – ESA- EXT. Traffic – Brussels Belgium – 04/10/2017 – ESA- EXT. Mother with child– Brussels Belgium – 04/10/2017 – ESA- INT. Close up APP OE atsma application – 2017 – Nova-Zembla Producties- ANIMATION. Sentinel-5P Scanning with TROPOMI – 2017 – NSO/ESA- EXT. Shimney stacks – unknown date – Videoblocks- EXT. People walking – Brussels Belgium – 04/10/2017 – ESA | These changes in our atmosphere have a real impact on human health. Nitrogen Dioxide or Sulfur dioxide for instance are pollutants often found in cities as a result of fossil fuel combustion such as road traffic. Long term exposure can decrease lung function and cause respiratory problems, in particular to children or old people. For these demographics air quality forecasts and warnings can be vital. With its unprecedented resolution Sentinel-5P can even distinguish air pollution levels within cities and thus provide the public with h accurate and much needed information. |
| 10:02:46:17- INT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA | **ITW Thilo Erbertseder Atmospheric Scientist EOC - DLR**The Sentinel-5 Precursor data will be combined with other models and other data to develop targeted services and they will be available as apps, social media information or web services. So that a lot of people can choose their they want to be informed about the environment. |
| 10:03:04:23- ANIMATION. Sentinel-5P 306°– 2017– ESA- INT. EOC Building, DLR: People working - Oberpfaffenhofen, Germany – 25/09/2017 – ESA- ANIMATION. TROPOMI – 2017– NSO/ESA- ANIMATION. Sentinel-5P flyby – 2017– ESA | Sentinel-5P is a good example of cooperation within the European commission’s Copernicus programme. On behalf of ESA the ground segment was developed by DLR and the instrument co-funded between ESA and the Dutch space agency. Soon this data should help protecting the health of many people worldwide. |
| **10:03:30:10** | **B-ROLL 001**  |
| 10:07:00:20- EXT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA | **ITW Prof. Dr.THOMAS TRAUTMANN, Head of Remote Sensing Institute - DLR****– ENGLISH***\*Processing of the data**\*Sentinel-5P improvements**\*importance of Sentinel-5P data**\*Practical applications* |
| 10:09:02:18- EXT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA | **ITW Prof. Dr.THOMAS TRAUTMANN, Head of Remote Sensing Institute - DLR****– German***\*Role of DLR in Sentinel-5P**\*Processing of the data**\*Sentinel-5P improvements**\*Practical applications* |
| 10:11:37:06- EXT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA | **ITW Thilo Erbertseder Atmospheric Scientist EOC – DLR - English***\*What will happen to the Sentinel-5P data**\*Who will benefit**\*Who will develop the applications**\*How does the general public benefits**\*Tends in megacities* |
| 10:13:50:01- EXT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA |  **ITW Thilo Erbertseder Atmospheric Scientist EOC – DLR - GERMAN***\*What will happen to the Sentinel-5P data**\*Who will benefit**\*Tends in megacities* |
| 10:15:10:14- EXT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA | **Shot of moving satellite dish receiving data** |
| 10:15:42:15- INT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA | **People working at EOC Receiving data calibrating receiving stations in Inuvik and Svalbard** |
| 10:16:37:09- INT. EOC building, DLR – Oberpfaffenhofen, Germany – 25/09/2017 – ESA | **Sentinel Long term data archive with taperobot** |
| 10:17:36:07- INT. assembly hall Plesetsk Cosmodrome – Russia – oktober 2017 | **Sentinel-5P being prepared for flight**  |
| **10:18:27:21** | **END** |