**ExoMars on its way for launch**

**A-ROLL**

TAPE STARTS: 10:00:00

VT STARTS: 10:00:10

10:00:10

[CLEANROOM SHOTS AT THALES ALENIA SPACE, CANNES]

The first of Europe’s ExoMars missions is complete and has left the Thales Alenia Space clean room in France. The Trace Gas Orbiter and its entry, descent and lander demonstrator, Schiaparelli, are now heading to the launchpad in Baikonur.

10:00:29

[ANIMATION PROTON ROCKET, SPACECRAFT SEPARATION AND ARRIVAL AT MARS]

ExoMars 2016, a joint mission between the European and Russian space agencies, will launch in March on a Proton rocket and arrive at Mars in October.

10:00:42

[GIANCINTO GIANFIGLIO

ExoMars Deputy Project Manager, ESA]

*INSET CLIP: “The two vehicles will separate three days before landing and the TGO will go into its capture orbit to go around Mars and the Schiaparelli instead will land on the surface of Mars.”*

10:00:58

[LANDER IN THALES ALENIA CLEAN ROOM AND ANIMATION OF EXOMARS 16 ARRIVING AT MARS AND LANDER DESCENT]

Schiaparelli will be the first spacecraft to descend through the atmosphere during the planet’s dust season. The AMELIA investigation will study science during entry and descent. And COMARS+ will monitor the heat flux experienced by the back of the lander. This will provide valuable information for future missions and help scientists understand the electrification processes in Mars’ atmosphere. Its descent camera DECA will image the landing sight and measure the atmosphere’s transparency.

[MARS STILL IMAGES OF MERIDIANI PLAIN AND MARS SURFACE ANIMATION]

As the lander’s main goal is as a demonstrator, it will land somewhere well studied - Meridiani Planum, where NASA’s Opportunity rover landed. The lander includes a science package called DREAMS that will study the Martian environment for several days.

10:01:50

[MARS EXPRESS ANIMATION]

In 2004 ESA’s Mars Express was the first spacecraft to detect methane on Mars. This finding was backed up by measurements from Earth.

10:02:03

[STILL IMAGE OF CURIOSITY]

More recently the Curiosity rover detected variable spikes of the gas.

10:02:08

[ANIMATION OF TRACE GAS ORBITER, MARS & OLIVINE MINERAL]

The ExoMars Trace Gas Orbiter will measure trace gases in the Martian atmosphere, including methane. On Earth, most of our methane comes from life - even bacteria - but there are other possible sources, such as hydrothermal reactions between water and some minerals in the mantle, such as olivine.

10:02:28

[JORGE VAGO

ESA's ExoMars 2018 project scientist]

*INSET CLIP: There is a process in the mantle that turns this olivine into a different mineral called serpentinite. This action with water releases a lot of hydrogen. Now, on a planet like Mars that has a CO2 atmosphere the hydrogen can react with the CO2 to produce methane. The interesting thing is that whether it’s the bacteria or the hydrothermal reactions in the mantle, in either case you need liquid water and in both cases it points to a planet that if you like is more ‘alive’ than people thought until now.*

10:03:08

[EXOMARS 2016 TGO ANIMATION, EXOMARS 2018 MISSION ANIMATION]

The Trace Gas Orbiter will serve as a data relay for the 2016 and the 2018 mission - which will contain a rover and surface science platform.

In 2018 the European-led rover will not only drive across the surface, but also drill two metres below it to collect samples and analyse them using its next-generation instruments. The collaboration between Russian and European space agencies is one which will expand our knowledge of Mars, searching for important clues to help us understand if there has ever been life on our neighbouring planet.

10:03:45

[ENDS]

**B-ROLL**

10:03:45

**GIANCINTO GIANFIGLIO**

**ExoMars Deputy Project Manager, ESA**

**[ENGLISH]**

*“The two vehicles will separate three days before landing and the TGO will go into its capture orbit to go around Mars and the Schiaparelli instead will land on the surface of Mars.”*

10:04:10

**GIANCINTO GIANFIGLIO**

**ExoMars Deputy Project Manager, ESA**

**[ITALIAN]**

Gianfiglio sums up the international cooperation between Europe and Russia on the ExoMars mission (in Italian).

Gianfiglio outlines the European contributions to ExoMars (in Italian).

10:05:37

**JORGE VAGO**

**ESA's ExoMars 2018 project scientist**

**[ENGLISH]**

“*There is a process in the mantle that turns this olivine into a different mineral called serpentinite. This action with water realises a lot of hydrogen. Now on a planet like Mars that has a CO2 atmosphere the hydrogen can react with the CO2 to produce methane. The interesting thing is that whether it’s the bacteria or the hydrothermal reactions in the mantle, in either case you need liquid water and in both cases it points to a planet that if you like is more ‘alive’ than people thought until now.”*

*“The type of science we are doing is not landing site specific. So for this mission the most important thing was landing in a place that was safe. Remember that the main goal of the lander is to demonstrate the  key technologies that then will be used for other missions. So we went for a place that we knew was very safe. It had been already well characterised, which is meridiani planum, the place were the Opportunity rover landed on.”*

10:07:03

**JORGE VAGO**

**ESA's ExoMars 2018 project scientist**

**[SPANISH]**

Vago explains what science will be done on the ExoMars mission that has not been done before (in Spanish).

Vago describes what will happen after the ExoMars 2016 mission (in Spanish).

10:08:35

**ANIMATIONS**

**ExoMars 2016 and ExoMars 2018**

Credit: Thales Alenia Space

This animation shows the launch of ExoMars 2016 on a Proton rocket and the release of the Trace Gas Orbiter (TGO) and the demonstrator lander. The lander then descends through the atmosphere and lands. This is followed by animation of the second mission, ExoMars 2018, launching and releasing a cruise module that is carrying a Mars Rover to the planet. Two parachutes slow down the lander’s descent and the rover is released on the Martian surface. Solar panels provide power and it deploys its instruments. It can drill up to 2 metres below the surface. The TGO from ExoMars 2016 will remain in orbit, act as a data relay and

10:13:32

**Arrival and unloading of ExoMars transport in Baikonur**

25 shots

10:15:40

**[ENDS]**