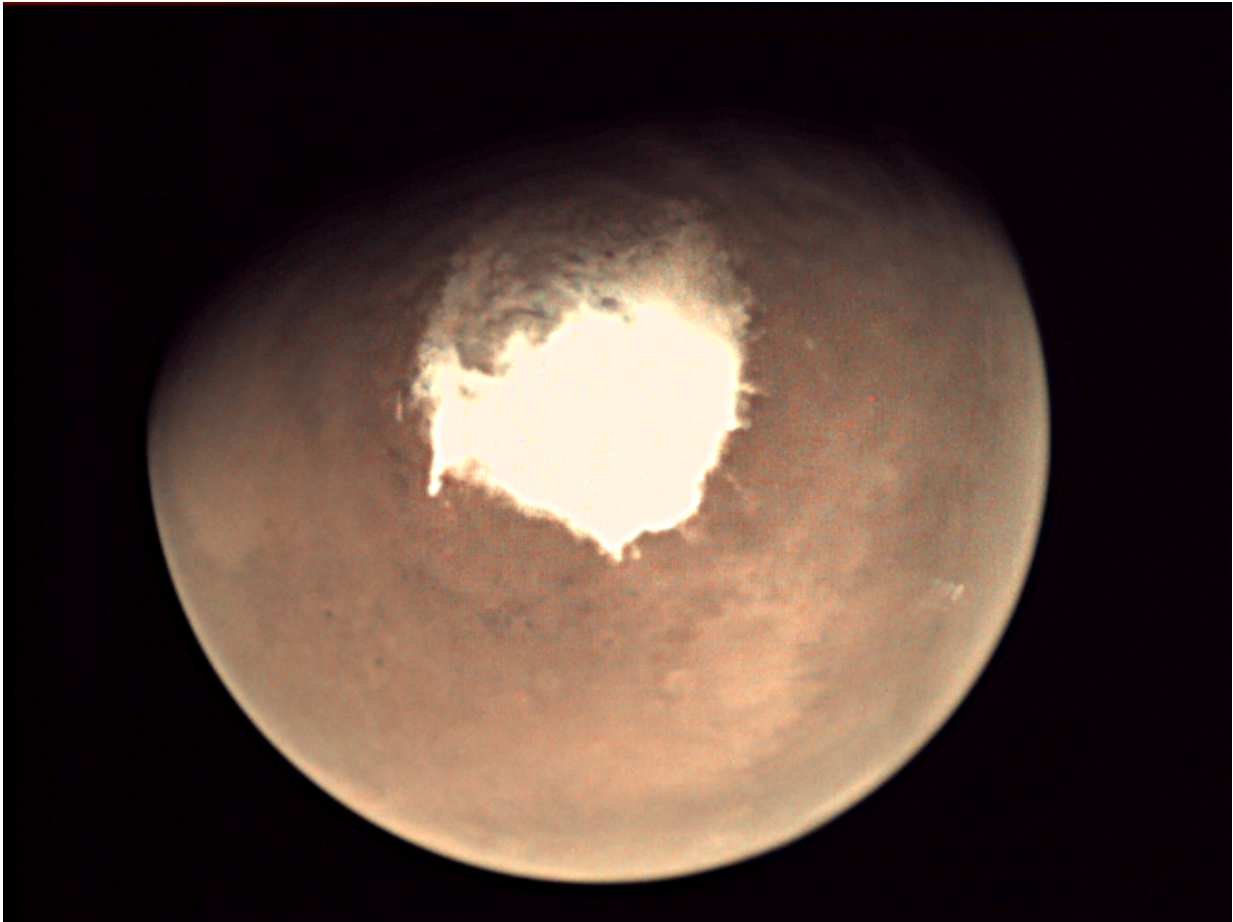


Full go-ahead for building ExoMars 2020

December 19 2016



The second part of the ExoMars programme, comprising a rover and surface science platform, is planned to launch to Mars in 2020. The image was taken by the webcam on ESA's Mars Express orbiter on 16 October 2016. Credit: ESA – CC BY-SA 3.0 IGO

The first ExoMars mission arrived at the Red Planet in October and now the second mission has been confirmed to complete its construction for a 2020 launch.

ESA and Thales Alenia Space signed a contract today that secures the completion of the European elements of the next mission.

The main objective of the ExoMars programme is to address one of the most outstanding scientific questions of our time: is there, or has there ever been, life on Mars?

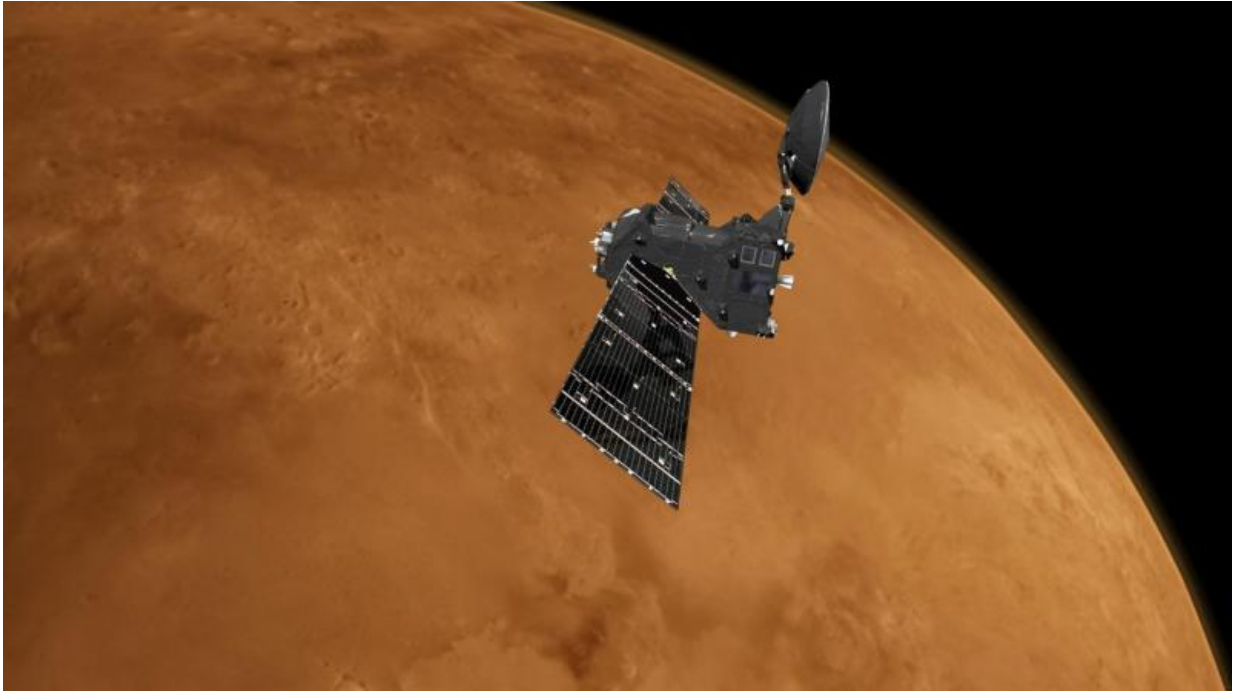
The Trace Gas Orbiter will soon be exploring this question from orbit: it will take a detailed inventory of trace gases, such as methane, that might be linked to biological or geological processes. The first test of the orbiter's [science instruments](#) was recently completed.

It will also act as a communications relay for various craft – in particular for 2020's rover and surface platform.

ESA's rover will be the first capable of drilling 2 m into Mars, where ancient biomarkers may still be preserved from the harsh radiation environment on the surface.

The Russian platform will carry instruments focused on the local atmosphere and surroundings.

ExoMars is a joint endeavour between ESA and Roscosmos, with important contribution from NASA.



Artist's impression of the ExoMars 2016 Trace Gas Orbiter at Mars. Credit: ESA/ATG medialab

The contract signed in Rome, Italy, secures the completion of the European elements and the rigorous tests to prove they are ready for launch.

These include the rover itself, which will be accommodated within the Russian descent module, along with the carrier module for cruise and delivery to Mars.

ESA is also contributing important elements of the descent module, such as the parachute, radar, inertial measurement unit, UHF radio elements, and the onboard computer and software.

The science instruments for the rover and surface platform are funded

by national agencies of ESA member states, Roscosmos and NASA following calls to the scientific community.

The structural models of the carrier and rover are expected to be delivered in January and February 2017, respectively, along with structural and thermal models of the various descent module elements.

"ExoMars is a cornerstone of ESA's exploration programme," says David Parker, ESA's Director of Human Spaceflight and Robotic Exploration. "Using its miniaturised life-search laboratory and advanced robotic technology, the mission will explore the Red Planet in search of new evidence to answer questions that have long fascinated humanity.

"Following the renewed support demonstrated by ESA member states in the recent Ministerial Council, this new contract allows us to complete the flight models of the European elements and keeps us on track for a July 2020 launch."

"The steadfastness and tenacity of both the European and Italian space agencies has reassured all program partners, and enabled us to continue our production work so we can go ahead with this new and very complex mission," says Donato Amoroso, Deputy CEO of Thales Alenia Space.

The landing site for the mission is still under consideration, with Oxia Planum a strong candidate. The target region shows evidence for a past wet environment that may have had suitable conditions for preserving ancient biosignatures. ESA and Roscosmos are expected to confirm the landing site around six months before launch.

Provided by European Space Agency

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