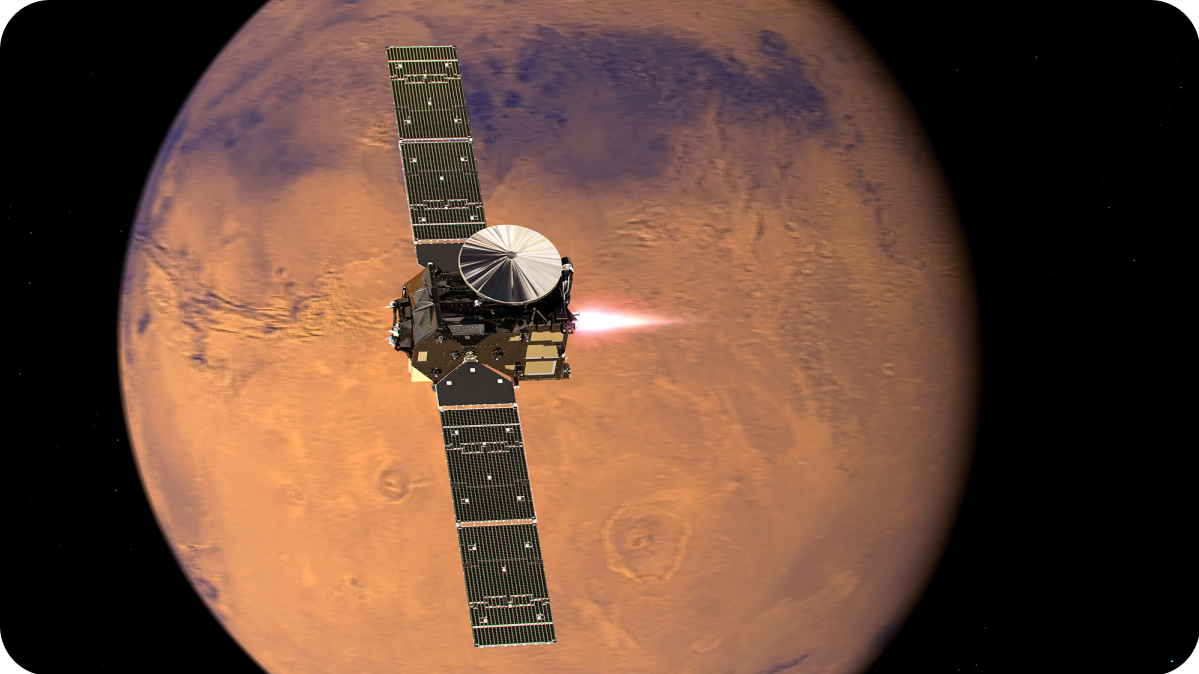


ExoMars mission ready for Mars orbit



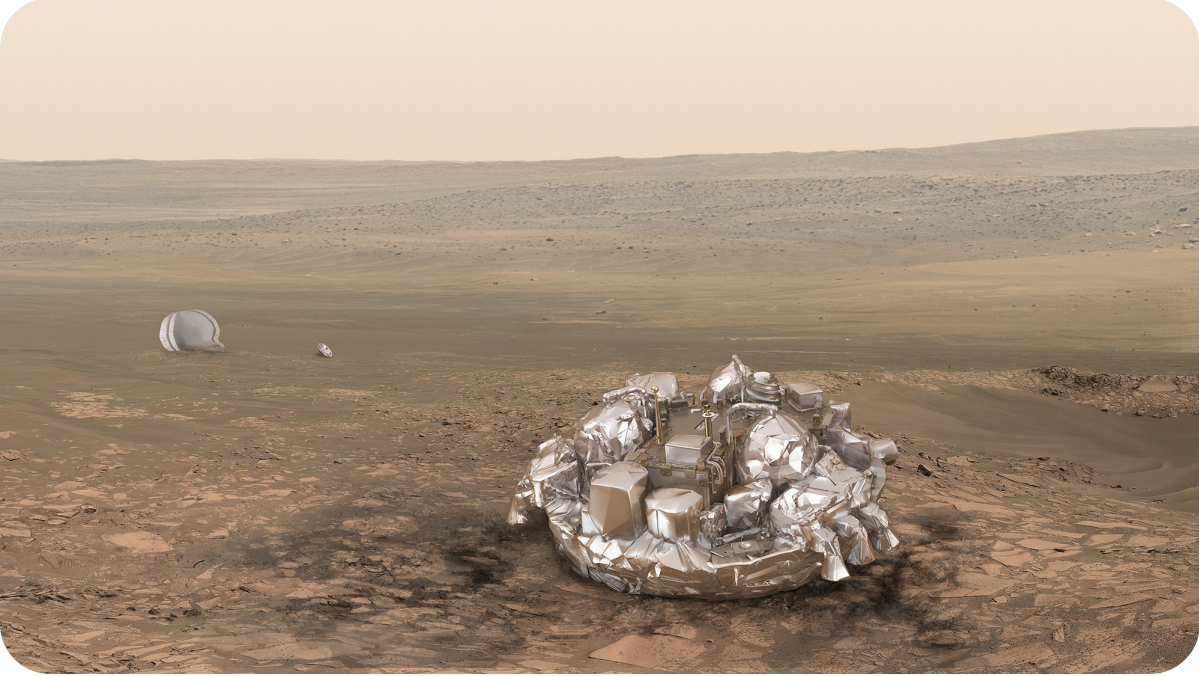
This picture shows what the Trace Gas Orbiter will look like when its thrusters are firing, moving it into orbit around Mars

[Access the image](#)

14 October 2016

The ExoMars 2016 mission is approaching the red planet Mars and will soon be in orbit! ExoMars 2016 has two parts: a probe called the Trace Gas Orbiter that will stay in space around Mars, and a robot called Schiaparelli that will land on the surface.

The Trace Gas Orbiter (TGO) will study if gases in Mars’ atmosphere are related to volcanic or biological activity. This will help us understand if Mars has ever hosted life! On 16 October, the TGO will release its robot Schiaparelli, which will then spend three days hurtling toward Mars. On 19 October it will hit the thin Martian atmosphere, and over six exciting minutes will go on a roller-coaster journey all the way to the surface! All being well it will land on a region of Mars called Meridiani Planum.



The Schiaparelli lander will look like this once it is on the surface of Mars

[Access the image](#)

Schiaparelli will be testing new technologies and gadgets that may be used on future landers. These include a heatshield, parachute, and even a crushable structure to protect it from the impact. As a bonus, Schiaparelli is also carrying scientific equipment that will enable it to make a weather report at the landing site.



The ExoMars mission control team

[Access the image](#)

Once Schiaparelli has been sent on its way, the Trace Gas Orbiter will begin a year of aerobraking. This is when friction from a planet’s atmosphere is used to change the path of a probe’s orbit. In this case, Mars’ atmosphere will adjust the Trace Gas Orbiter’s orbit to be more circular. Hopefully this will be complete by the end of 2017. Then the science can begin and Mars’ atmosphere will be studied! The Trace Gas Orbiter is also going to act as a relay for ESA’s ExoMars 2020 rover, ensuring that signals sent from the surface of Mars will make it all the way back to scientists on Earth.

To make the ExoMars mission, ESA teamed up with Russia’s Roscosmos space agency. Hopes are high that this joint mission will help us to learn more about Mars!

Cool fact: The Schiaparelli lander will be taking the first measurements of electric fields from the surface of Mars. These may help us to understand how dust storms on Mars begin.

Related articles

[The Red Planet](#)

[Do Martians exist?](#)

Related news

[Two possible landing sites chosen for ESA’s ExoMars Rover](#)

[Liftoff for ESA’s ExoMars!](#)

[ESA’s ExoMars searches for alien life](#)

[ExoMars mission ready for Mars orbit](#)

[ExoMars arrives at the Red Planet!](#)