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Why are we all going to Mars?

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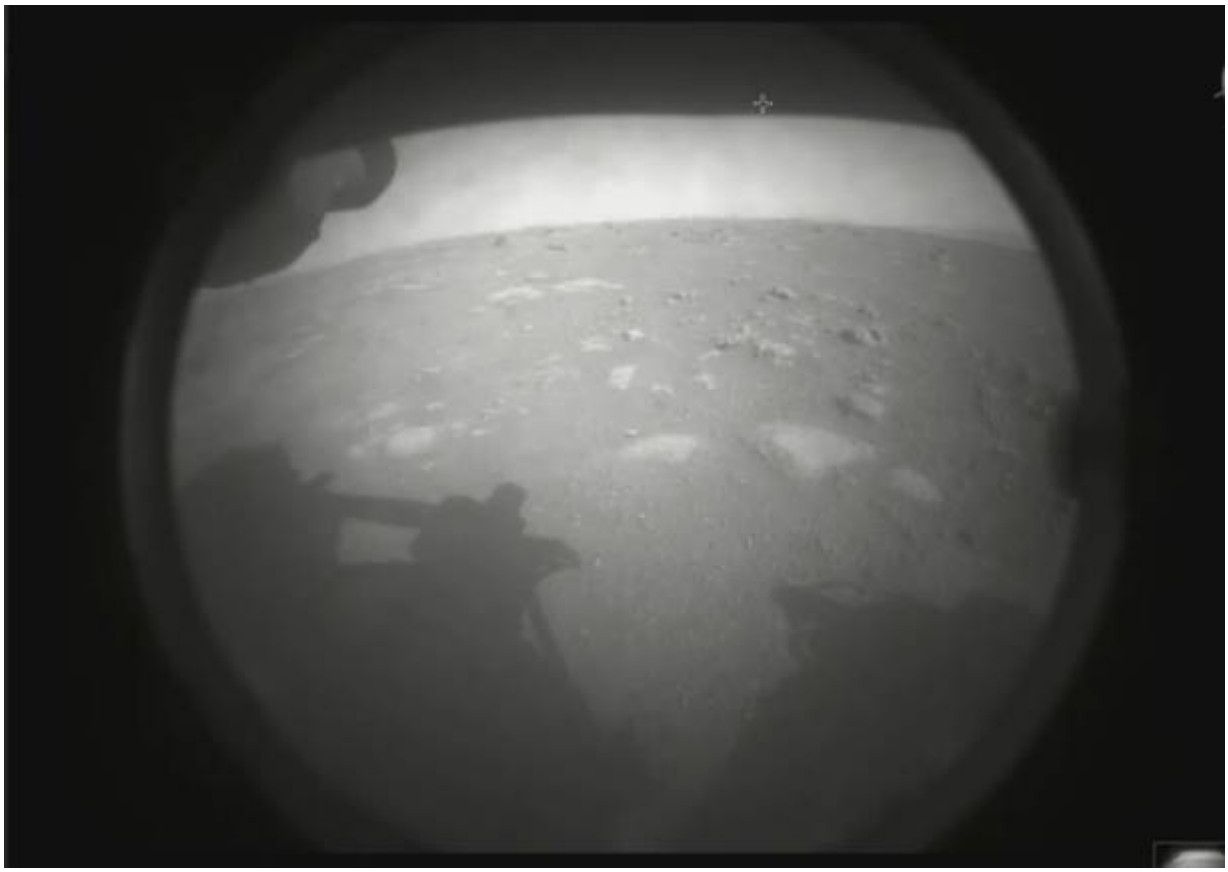

So they made it. The seven minutes of terror from atmospheric entry to landing on Mars ended in a happy ending. An outcome that was anything but predictable, given that in this short space of time the probe had to slow down from a speed of **5.9 kilometres per second.**

Perseverance, the name of the rover that **NASA** sent to Mars, thus began its mission. However, there were **Hope** "waiting for it" on the planet, that is an orbiter launched by the **United Arab Emirates**, and **Tianwen-1**, that is a Chinese mission that also involves the landing of a rover. But why is **Mars** so crowded these days?

The American mission wants to look for clues about the ancient existence of **microbial life forms** on the planet. This interest was due to the discover of elements which suggest that on the Martian surface there was **liquid water** one time (today it is impossible, since the average temperature falls **50 degrees below zero**).

Not only. The rover, that is a vehicle about the size of a SUV able to move on the Martian surface, will have to collect **samples of rock** which a later mission will retrieve to bring them down to Earth. During this mission, also **Italy** will have a **major role**.

Instead, Emirates' mission goal is to study the Martian atmosphere, particularly its lowest layer**. Abu Dhabi**'s scientists are looking for elements that allow to better understand the Martian **climate** and its

influence on the fact that the planet atmosphere is scattering oxygen and hydrogen into space.

The **Chinese space agency** planned instead a more complex mission. In fact, for about ten days, a probe orbits around the planet, here to understand the climate and the atmosphere in a better way. In a couple of months there will be a touchdown to lay down a rover that will study the geological composition of Mars soil.

All these activities are obviously preparatory for the landing of humans on Mars. A landing that, according to the patron of **SpaceX Elon Musk**, could happen by the middle of the decade, even though it is more credible to wait for the end of the next one.

But the study of a planet on which there was once water, we are obviously talking about millions of years ago, has another goal: understand the climate evolution on a planet that has similar characteristics to Earth and deduce clues that could help scientists to understand the climate evolution on our planet.

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