

All eyes on Trump over Mars

December 16 2016, by Pascale Mollard, Mari  tte Le Roux



A Russian Proton-M rocket carrying the European-Russian ExoMars 2016 spacecraft blasts off from the launch pad at Baikonur cosmodrome

The year 2016 has seen a rekindling of the human desire to conquer Mars, with public and private interests openly vying to take the first step on the Red Planet, possibly with a stopover on the Moon.

Space-faring nations are mostly united in viewing Mars as the next frontier with many still pooling their money and expertise to make the dream a reality, despite souring relations between them.

But the election of Donald Trump—with inevitable impacts on science policy, budgets and diplomatic relations—has cast doubts on the future of space exploration.

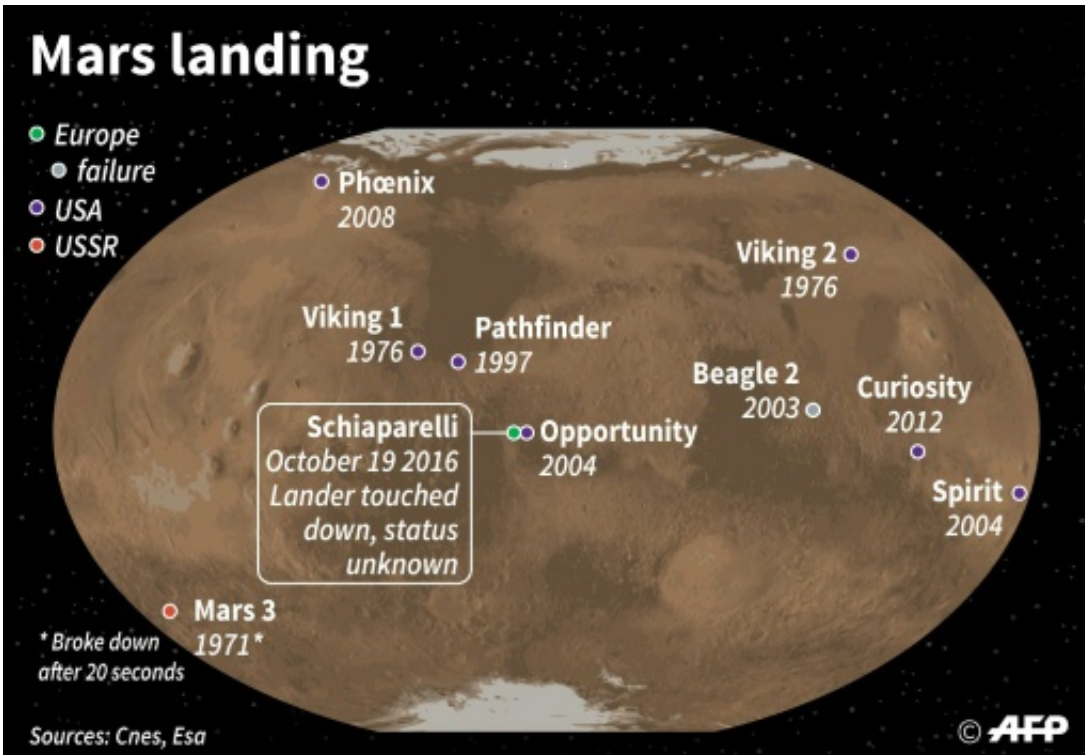
Space bosses and investors are waiting on tenterhooks for the US president-elect to spell out his plans for NASA—and to see whether the future will be one of cooperation or competition.

On the campaign trail in the space industry state of Florida, Trump said in October he wanted to "free Nasa from the restriction of serving primarily as a logistics agency for low-orbit activity".

He did not go into details, but low-orbit programmes include the International Space Station (ISS), the Hubble Space Telescope and Earth-observation satellites.

Among them are NASA science orbiters for climate monitoring, a programme Trump has also threatened to stifle.

He told crowds in Sanford that NASA's core mission will be [space exploration](#), and promised: "America will lead the way into the stars".



Mars space missions

This could be good news for pursuing Martian ambitions.

Outgoing president Barack Obama already set the goal of a round-trip mission to the fourth rock from the Sun by the 2030s, with the "ultimate ambition" of creating a settlement there.

That is also the ambition of entrepreneur and SpaceX founder Elon Musk, who launched an ambitious plan in September to establish a colony on Mars—sending 100 humans at a time—starting in 2024.

Dutch company Mars One, similarly, plans to send explorers to Mars by 2031, funded partly by a related television reality show.

The route to Mars may very well be via the Moon, analysts say, with the

European Space Agency mooting plans for a lunar village—a stopover for spacecraft to destinations further afield.

Going to Mars, said John Logsdon of the Space Policy Institute at George Washington University, "depends on how quickly the international effort to go back to the Moon can be assembled, how much budget the US spends on that, what the level of the NASA budget is.

"And all those are unknown right now."



A model of the landing unit Schiaparelli from the European-Russian ExoMars 2016 mission

New Space Race?

Following years of multinational cooperation, "the current trend is for

space-faring nations to strengthen and increase national autonomy in achieving success in space", says a European Space Policy Institute document.

Countries want their own rockets and launchpads in case "unfavourable geopolitical developments" place their programmes at risk.

Since the US-Soviet space race launched the first human into Earth orbit in 1961 and placed the first man on the Moon in 1969, the trend has been towards galactic teamwork.

A high point has been the ISS, a joint project—continuously inhabited since 2000—of America, Europe, Russia, Japan and Canada.

With only Russia able to ferry astronauts to the orbiting science lab today, countries work together on sending cargo.

There are also joint deep-space experiments, such as the European-Russian ExoMars rover planned for 2020.

"It used to be the US and the Soviet Union that had the capability to go into space. Now India can do it, Japan can do it," Sa'id Mosteshar, director of the London Institute of Space Policy and Law told AFP.



Tesla Motors CEO Elon Musk speaks about the "Interplanetary Transport System" which aims to reach Mars with the first human crew in history

Only China is not party to any big international projects, mainly due to its complicated diplomatic relationship with the United States.

But Beijing was nonetheless spending "a significant amount" on space, said Mosteshar.

It has an orbiting space lab, plans for a [manned space station](#) by 2022, and could become the second country to place a human on the moon. The last was an American in 1972.

But observers say there is no race, as such—countries, even private corporations, are unlikely to ever have enough money to go it alone.

Most feel space cooperation will continue—as it did even at the height of the American-USSR cold war—in spite of what politicians do on Earth.

Trump is seen as likely to be closer to Russia under Vladimir Putin than Obama had been, but has already incurred the diplomatic wrath of China.

"International collaborative [space](#) projects are by nature long-term commitments," said Mosteshar.

"If in the midst of a project there are political differences that arise between the countries involved, it's difficult to stop the ongoing experiment or other activity."

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