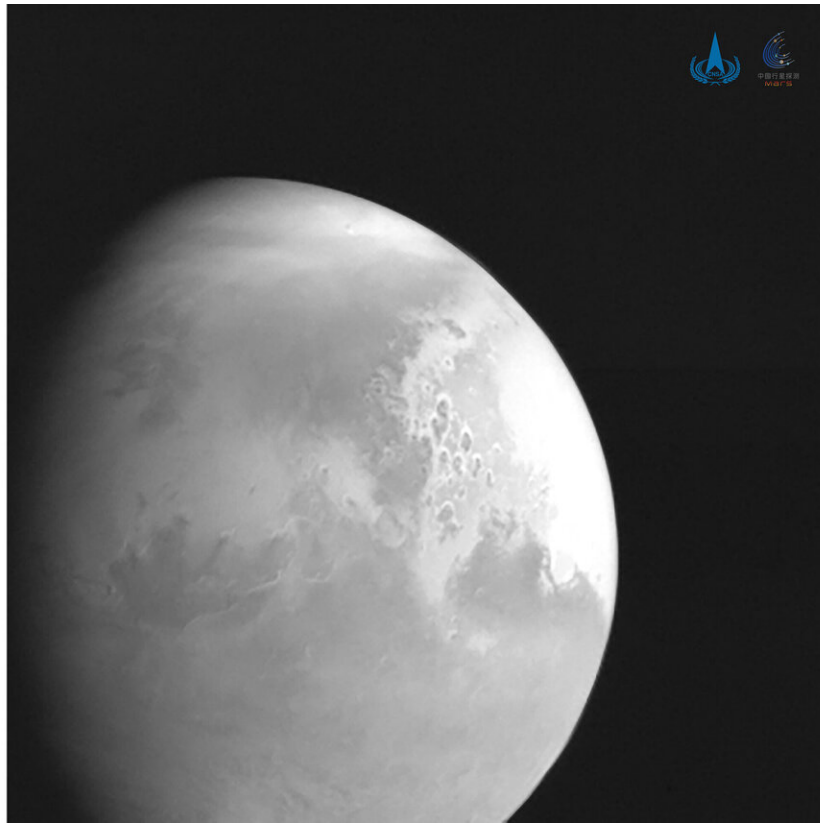


Chinese spacecraft enters Mars' orbit, joining Arab ship

February 10 2021, by Sam McNeil



In this undated photo released by the China National Space Administration, a view of the planet Mars is captured by China's Tianwen-1 Mars probe from a distance of 2.2 million kilometers (1.37 million miles). A Chinese spacecraft appears poised to enter orbit around Mars on Wednesday, Feb. 10, 2021, one day after an orbiter from the United Arab Emirates did so, and about a week ahead of an American attempt to put down another spacecraft on the surface of the red planet. (CNSA/Xinhua via AP)

A Chinese spacecraft went into orbit around Mars on Wednesday on an expedition to land a rover on the surface and scout for signs of ancient life, authorities announced in a landmark step in the country's most ambitious deep-space mission yet.

The arrival of Tianwen-1 after a journey of seven months and nearly 300 million miles (475 million kilometers) is part of an unusual burst of activity at Mars: A spacecraft from the United Arab Emirates swung into orbit around the red planet on Tuesday, and a U.S. rover is set to arrive next week.

China's [space agency](#) said the five-ton combination orbiter and rover fired its engine to reduce its speed, allowing it to be captured by Mars' gravity.

"Entering orbit has been successful ... making it our country's first artificial Mars satellite," the agency announced.

The mission is bold even for a [space program](#) that has racked up a steady stream of achievements and brought prestige to China's ruling Communist Party.

If all goes as planned, the rover will separate from the spacecraft in a few months and touch down safely on Mars, making China only the second nation to pull off such a feat. The rover, a solar-powered vehicle about the size of a golf cart, will collect data on underground water and look for evidence that the planet may have once harbored microscopic life.



The world tallest tower, Burj Khalifa is lit up with a laser show to celebrate the Hope Probe entering Mars orbit as a part of the Emirates Mars mission, in Dubai, United Arab Emirates, Tuesday, Feb. 9, 2021. The spacecraft from the UAE swung into orbit around Mars in a triumph for the Arab world's first interplanetary mission. It is the first of three robotic explorers arriving at the red planet over the next week and a half. (AP Photo/Kamran Jebreili)

Tianwen, the title of an ancient poem, means "Quest for Heavenly Truth."

Landing a spacecraft on Mars is notoriously difficult. Smashed Russian and European spacecraft litter the landscape along with a failed U.S. lander. About a dozen orbiters missed the mark. In 2011, a Mars-bound Chinese orbiter that was part of a Russian mission didn't make it out of

Earth orbit.

Only the U.S. has successfully touched down on Mars—eight times, beginning with two Viking missions in the 1970s. An American lander and rover are in operation today.

China's attempt will involve a parachute, rocket firings and airbags. Its proposed landing site is a vast, rock-strewn plain called Utopia Planitia, where the U.S. Viking 2 lander touched down in 1976.

Before the arrival this week of the Chinese spacecraft and the UAE's orbiter, six other spacecraft were already operating around Mars: three U.S., two European and one Indian.



An Emirati man takes a video with his phone of the celebration after the Hope Probe enters Mars orbit as a part of the Emirates Mars mission, in Dubai, United Arab Emirates, Tuesday, Feb. 9, 2021. The spacecraft from the UAE swung into orbit around Mars in a triumph for the Arab world's first interplanetary mission. It is the first of three robotic explorers arriving at the red planet over the next week and a half. (AP Photo/Kamran Jebreili)

All three of the latest missions were launched in July to take advantage of the close alignment between Earth and Mars that happens only once every two years.

A NASA [rover](#) called Perseverance is aiming for a Feb. 18 landing. It, too, will search for signs of ancient microscopic life, collecting rocks that will be returned to Earth in about a decade.

China's secretive, military-linked space program has racked up a series of achievements. In December, it brought [moon rocks](#) back to Earth for the first time since the 1970s. China was also the first country to land a [spacecraft](#) on the little-explored far side of the moon in 2019.

China is also building a permanent space station and planning a crewed lunar [mission](#) and a possible permanent research base on the moon, though no dates have yet been proposed.

While most contacts with NASA are blocked by Congress and China is not a participant in the International Space Station, it has increasingly cooperated with the European Space Agency and countries such as Argentina, France and Austria. Early on, China cooperated with the Soviet Union and then Russia.

© 2021 The Associated Press. All rights reserved. This material may not

be published, broadcast, rewritten or redistributed without permission.

Citation: Chinese spacecraft enters Mars' orbit, joining Arab ship (2021, February 10) retrieved 28 April 2024 from <https://phys.org/news/2021-02-chinese-spacecraft-mars-orbit-arab.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.