What's Next for the Global Space Race

The U.S. is vying to preserve its long-held dominance of space, as China, Russia and others make ambitious plans to explore the solar system. Here's a look at the missions in the works.

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Half a century after the U.S. won the race to put a man on the moon, a new space race—with some new contenders—is gathering pace. China in particular has some audacious plans: it wants to build a manned lunar base within the next decade, and start mining the moon for energy resources.

That's jolted the U.S. to respond in order to preserve its long-held leadership in space. In March, Vice President Mike Pence told the recently re-established National Space Council that the U.S. should return astronauts to the moon by 2024 "by any means necessary" so as to beat the Chinese.

But China isn't the only challenger. Japan and Russia both intend to land people on the moon by around 2030, while India is likely weeks away from deploying its first lunar lander.

Deep-space exploration, too, is poised to enter a new phase, as China, Europe and the U.S. make preparations to probe uncharted regions of the solar system by harnessing the latest technology. For a U.S. that's rediscovering its fascination with space, this could all culminate in a first manned Martian landing around 2033.

Here's an overview of the missions planned by each major government player:

CHINA

2020: Mars rover and lander

2022: Space station to be built by joining three modules in orbit

2025: Construction to start on a lunar base, with a manned facility planned for 2030

2028: Mars probe; the first to return Martian samples to Earth

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2029: Jupiter probe; China's first to outer reaches of the solar system

EUROPE

2020: Europe's first Martian rover, known as the Rosalind Franklin rover

2022: Mission to study three of Jupiter's moons with the Jupiter Icy Moons Explorer

INDIA

2019: India's first lunar lander/rover, the Chandrayaan-2, to launch

2021: India's second Mars probe, the Mangalayaan-2, to launch

JAPAN

2021: Japan's first unmanned lunar probe to launch

2030: Manned lunar landing

RUSSIA

2031: First of a series of moon landings by Russian cosmonauts

2034: Construction of Russian lunar base to begin

U.S.

2021: James Webb Space Telescope, the successor to Hubble, begins 10-year mission

2023: Space station orbiting the moon, known as Lunar Orbital Platform-Gateway, starts operations

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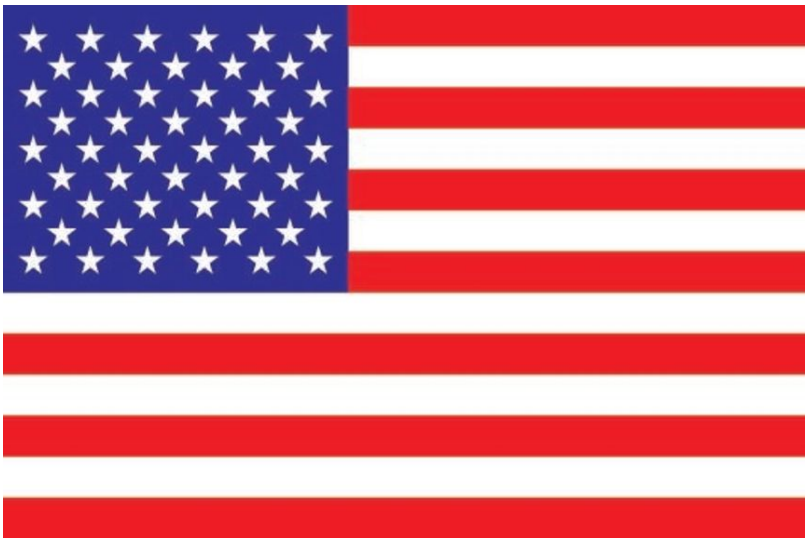

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2023: Manned moon landing, NASA's first in over half a century

2026: Probe known as the Europa Clipper to reach Jupiter's moon, Europa

2033: First manned mission to Mars

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