

## III. Science

### *Beyond the Far Side*

# The New Moon Race

by Peter Martinson

Sept. 24—On September 16, 2024, China published a study of material recently gathered from a place in the Solar System hitherto untouched by Man—the far side of the Moon. Scientists at the Key Laboratory of Lunar and Deep Space Exploration in Beijing were the first to study almost 2 kg of rock and soil returned from the far side by the latest Chinese lander, Chang’e-6.<sup>1</sup> These samples, dug out from the largest meteor crater in the entire Solar System, exhibit mineralogy absolutely distinct from all samples gathered from the near side.

If the 1960s were characterized by a space race of crash programs to get boots on the Moon, the first quarter of the 21st Century can be characterized as a steady march back to the Moon—to stay. The march this time has been led, not by the U.S. and Russia, but rather by the U.S. and China, and supported by a group of other nations not traditionally known as space powers, including India, Israel, the United Arab Emirates, and Mexico. The race is also joined by a phalanx of private space companies mainly in the U.S.A., but also in India and China.

The focus is the Lunar south pole, which is home

1. “Nature of the Lunar Farside Samples Returned by the Chang’e-6 Mission.” Chunlai Li, Hao Hu, Meng-Fei Yang, Jianjun Liu, Qin Zhou, Xin Ren, Bin Liu, Dawei Liu, Xingguo Zeng, Wei Zuo, Guangliang Zhang, Hongbo Zhang, Saihong Yang, Qiong Wang, Xiangjin Deng, Xingye Gao, Yan Su, Weibin Wen, Ziyuan Ouyang, [National Science Review, September 16, 2024](#).



Darya Kawa Mirza Facebook page

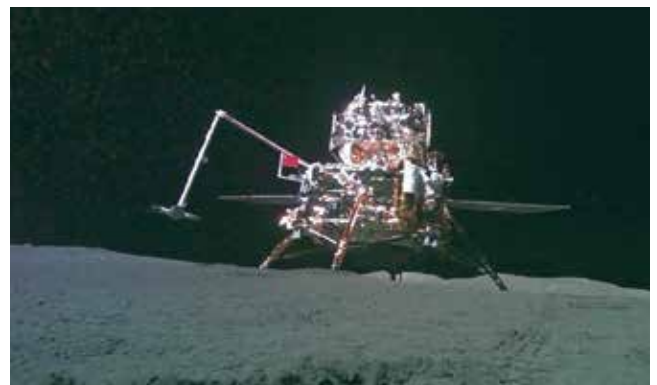
*There is a new race to get to and colonize the Moon.*

to the largest meteor impact basin yet known: South Pole-Aitkin Basin. This basin contains several craters that are deep enough to be permanently shadowed, and that have given us hints that they have water ice. That water ice is the key that will sustain our permanent colonies.

This article will present a brief survey of important concepts about the Moon, why it is important to Mankind’s future, and how the most recent lunar missions work toward that future. It is intended to be a summary article, and predecessor to a series of future articles that focus on various aspects of recent Lunar research.

### **What Is the Moon?**

Let us review what the Moon represents for Mankind.



CNSA

*The Chang’e-6 lander, which dug out lunar soil sent back to Earth for study.*

To the idiot, the Moon is a big ball of dead rock we've already been to. To the rest of us, it is a crucial scientific instrument that must be used.

Johannes Kepler demonstrated that the Creator of the universe organized His creation so we could learn how it all works. Specifically, He gave us a permanent satellite, positioned in such a precise way that it serves as a sort of lens.

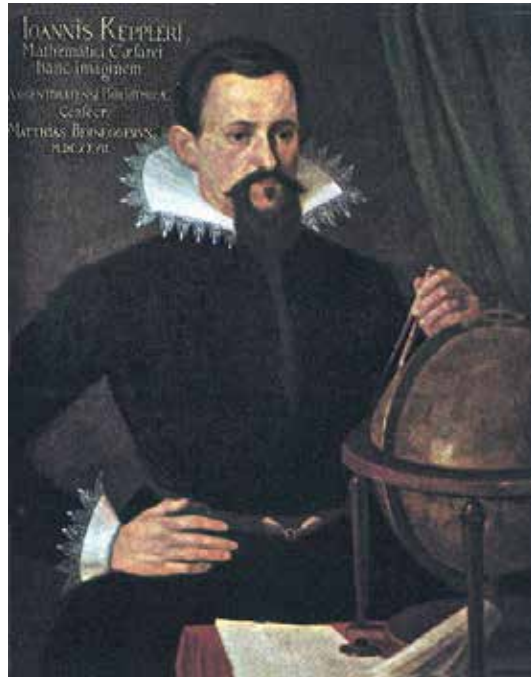
It's just the right size and distance to sometimes produce an exact solar eclipse. Eclipses have long produced a powerful need to look to the cosmos. These events were studied by Thales of Miletus (620-546 BC), and later helped Aristarchus (310-230 BC) to make

the first determination of the distances between Sun, Earth, and Moon. But there are other qualities that make the Moon useful for us.

One side always points away from the Earth. There is no other exposed place in the Solar System that is always shielded from the Earth. This makes the far side the perfect spot for radio and other telescopes, because they can be permanently freed from the interference of Earth broadcasts.

The Moon also serves as the Solar System's timekeeper. The Moon, which seems to have been relatively inert after its surface lava flows solidified, has preserved a record of meteorite impacts that goes back almost to the earliest days of the Solar System. Astronomers have developed a technique called crater density analysis by which they can determine how the rate of bombardment has changed over the past four billion years. We use this method to figure out when certain events happened on other planets. For example, we know from crater counting that the inner planets of the Solar System experienced a heavy bombardment of meteorites around four billion years ago. This bombardment may have been caused by a dramatic migration of the two largest gas giant planets, Jupiter and Saturn.

It is the closest object to the Sun without either a magnetic field or atmosphere. This made the Moon an



Kepler-Museum in Weil der Stadt  
*Johannes Kepler*

ideal target of fusion scientists from the University of Wisconsin–Madison, led by Gerald Kulcinski, who sought helium-3 to power the most favorable fusion reactions. Helium-3 is one of the major constituents of the solar wind from the Sun. There is no way that helium-3 can get past the Earth's magnetic field and form deposits here; the Moon is a different story. Kulcinski's collaborator John Santarius calculated that, over the lifetime of the Moon and Sun, possibly more than 500 million metric tons of helium-3 could have collected on the Lunar surface. When they tested the hypothesis by examining some samples returned during the Apollo missions, they found

helium-3 in every single sample.

It is as if the Creator of the universe is begging us to visit!

## **The New Race**

The new race to the Moon has begun.

On the one side is China. China first began making strides toward the Moon back in 2007 with the launch of the Chang'e-1 probe. Back then, before the United States Congress passed a National Defense Authorization Act with the now infamous Wolf Amendment, China sent several emissaries from the Chinese National Space Agency (CNSA) to study how NASA got to the Moon. China's space program then began using NASA mission architecture (Mercury, Gemini, Apollo) along with Russian spacecraft design, and succeeded in building what is currently the world's most robust national manned space program.

On the other side is the United States. After NASA succeeded in getting boots on the Moon in 1969, the new administration of President Richard Nixon embarked on a series of massive cuts to NASA's budget. Prior to these cuts, planetary scientists and engineers around the nation were expecting to send manned missions to Mars by the end of the century. Plans were underway to build an Earth-orbiting space station, design nuclear fission rockets, and expand a permanent



NASA

*The last U.S. trip to the Moon: Jack Schmitt poses beside the U.S. flag during the Apollo 17 mission, Dec. 11, 1972.*

American footprint on the Moon.

However, the trifecta of the Vietnam-Cambodia war, the rock-drug-sex counter-culture, and the destruction of the Bretton Woods fixed-exchange-rate monetary system pushed the Nixon administration to make drastic cuts.<sup>2</sup> The Apollo program was sharply cut in both number and scope of missions; the orbiting space station was cancelled and the NERVA (Nuclear Engine for Rocket Vehicle Applications) program was stopped. In their place was substituted an over-promised but under-delivered program called the Space Transport System, today known as the Space Shuttle. When that program came to an end in 2012, the U.S.A. had no program to send people into space.

Only during the two post-Clinton Republican presidencies has this status quo been challenged, first with President Bush's Constellation program (significantly reduced in scope by President Obama), and then with President Trump's Artemis program. The Space Launch System (SLS), inherited as a kind of mutant from Bush's Constellation program, is still under development. However, several private American space companies have begun sending astronauts into space, significant among these being SpaceX and Boeing.

2. "How America's Space Program Has Been Nearly Destroyed." Marsha Freeman, *Executive Intelligence Review*, [Volume 43, Number 7, 2016, p. 17.](#)

The two sides of this race are represented by the two national programs, but also by two international Lunar agreement frameworks.

On the Western side, the Trump administration created the Artemis Accords, an update on the 1967 Outer Space Treaty, that clarifies aspects like usage of Lunar resources. Creation of these accords coincided with the announcement of the NASA Artemis program, which aims to land astronauts on the Moon by 2026. Over 45 nations have signed the accords, including India, the fourth nation to perform a soft landing on the Moon.

On the Eastern side, China and Russia drafted and signed the International Lunar Research Station agreement in June 2021. This agreement is centered around the Chinese plan to build a research base near the Moon's south pole. The program includes all the Chang'e probes and landers, as well as Russia's renewed Luna program. Since 2021, the agreement has been written into Russian law, and attracted signatures from 11 other countries.



NASA

*As part of NERVA, the U.S. project for a Nuclear Engine for Rocket Vehicle Applications, technicians at NASA's Lewis Research Center prepare a rocket nozzle for testing in 1964. The program was cancelled in 1973 after the Nixon administration savagely cut NASA's budget.*



*The U.S. Moon fly-by mission, Artemis II, is planned for late 2025. Here the crew members pose at the Kennedy Space Center, Merritt Island, Florida.*

## The Missions

### 1. The West: Artemis

The United States most recently landed a craft on the Lunar surface in February 2024. This is the first time the U.S.A. has landed anything on our satellite since Apollo 17, more than 50 years ago. This mission, called Intuitive Machines 1 (Odysseus), was a demonstration of NASA's Commercial Lunar Payload Service (CLPS) program. The idea is that the U.S. will employ a form of public-private partnership to get back to the Moon—NASA will provide funding, mission planning, and coordination, along with some technology (like the Space Launch System), while private space companies will provide the bulk of the technology.

Other signatories of the Artemis Accords that have successfully landed on the Moon include Japan, which landed the Smart Lander in January 2024, and most importantly India, whose successful Chandrayaan-3 mission included an orbiter, lander, and rover.

Another significant milestone was reached in 2022, when NASA launched the Artemis I, a fully operational SLS rocket with an Orion crew capsule up top, which flew to Lunar orbit, returned to Earth, and splashed down in the Atlantic Ocean. This was an unmanned mission, designed to test all the components necessary to deliver astronauts to Lunar orbit and return them safely to the Earth.

The United States and India currently operate several spacecraft that orbit the Moon. These include

NASA's Lunar Reconnaissance Orbiter (LRO), whose maps form the foundation for all the Lunar missions of the 21st Century; as well as the Indian Space Research Organization's (ISRO's) Chandrayaan-1, which was the first craft to find unambiguous traces of water ice in the southern craters.

### 2. The East: China and Russia

China has had incredible success over the past two decades with Moon missions. CNSA first landed softly on the Moon back in 2013 with the Chang'e-3 mission. This was followed in 2019 with the Chang'e-4 mission, which not only was the first craft to land on the far side of the Moon, but also carried a rover, Yutu (Jade Rabbit), that operated for several days. One year later, Chang'e-5 landed on the Lunar near side, deployed a rover (Yutu-2)—still functioning today—and also successfully sent almost 2 kg of Lunar soil back to the Earth. This is the first sample returned since the Soviet Luna-24 lander back in 1976! It should be noted that a new mineral was found in the Chang'e-5 samples, called Changesite-(Y), which contains helium-3. Finally, Chang'e-6 landed on the far side in mid-2024, and also returned samples to the Earth.

Though Russia had a long history of successful space missions, it has yet to repeat these successes a half-century later. Its Luna-25 mission deployed a lander within days of the arrival of India's Chandrayaan-3, but the lander crashed on impact.

## The Future

It is important to recognize that the space race of the 21st Century is not about getting people to Mars, but back to the Moon. For many years prior to the 2016 election of President Trump, a debate has raged about which terrestrial body to target first. For example, there are arguments that favor bypassing the Moon and heading straight to Mars, such as Robert Zubrin's Mars First program.

Lyndon LaRouche himself staked a position on this debate as early as his 1988 presidential election campaign, when he followed rocket pioneer Krafft Ehricke in reasoning that the Moon was the first, necessary

stop in our voyage to Mars, presented dramatically as a [30-minute television presidential campaign program](#), and a [longer script](#) later published in *EIR*, “The Woman on Mars,” March 24, 2017.

A sustainable presence in any non-maritime setting requires robust infrastructure. On land, that means rail-centered development corridors, such as the Chinese Belt and Road Initiative. In space, that means sustainable ports with manufacturing capability along with established regular supply routes between planets.

The Moon is not only a stable base on which to build a growing set of stations and factories. It can be reached within a few days in case of inevitable problems. This clearly defined route also suggests a regular schedule of transport shuttles. The Moon’s relatively weak gravitational well would allow spacecraft to lift off and enter orbit with minimal expenditure of fuel. It also provides a training ground for people learning to operate on an airless planetary surface.

In other words, colonies on the Moon represent a necessary piece of infrastructure on our way to colonizing the rest of our Solar System, including Mars. It now appears that the Mars-or-Moon first debate has

been decisively won. We are going first to the Moon.

### Conclusion

It is curious to note that the primary missions to the Moon undertaken by the United States and China were named after pagan gods: Apollo, Chang’e, and Artemis. In his “Prometheus Bound,” the Greek playwright Aeschylus conjures an image of Prometheus, the Titan who gave a meek human race powers formerly relegated to the realm of Zeus and the other gods, such as fire and astronomy. In this way, Prometheus taught us to defy the gods.

Man is the first known creature to leave the surface of his home planet, by his own will. To do so, he had to first discover, and then wield, through invented technology, those powers necessary to navigate the stars. Before the first man traveled in space, those powers were constrained to operate at the will of the Creator alone.

What we are witnessing today, with the recent orbit of Artemis I and the sample returns of Chang’e-5 and -6, and against the backdrop of increasing threat of a nuclear apocalypse, is the true nature of Man, striving to become ever more like the Creator.

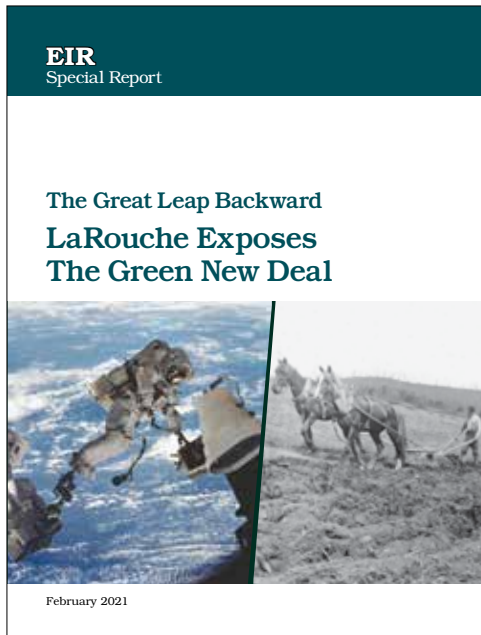
## EIR Offprint Special Report Available

### The Great Leap Backward: LaRouche Exposes the Green New Deal

*Executive Intelligence Review* has released this Special Report to warn of the extreme danger to mankind represented by the Green New Deal, also called “The Great Reset” by the leaders of the Davos World Economic Forum.

Already being implemented, this plan is taking over the direction of national economies from sovereign governments, using the power of central banks and the too-big-to-fail private financial institutions, cutting off credit to fossil fuel power generation and to industrial and agricultural enterprises claimed to emit too much carbon. Meanwhile it is creating a new huge bubble in the “sustainable fuel” sector, hoping to prop up the increasingly bankrupt financial system.

Stopping it by returning to a Hamiltonian American System credit policy, requires an understanding which is the purpose of this report.



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