



2026 Will Be the Year NASA Astronauts Fly Around the Moon Again If All Goes to Plan

If all goes according to NASA's plans, 2026 will finally be the year that astronauts once again launch to the moon. In a matter of months, four astronauts are poised to fly around the moon on a roughly 10-day mission — the closest humans will have gotten in more than half a century.

The flight, known as Artemis II, could lift off as early as February and would be a long-awaited jump start to America's lagging return-to-the-moon program. The mission will serve as a crucial test of NASA's next-generation Space Launch System rocket and Orion spacecraft, which have been in development for more than a decade and faced years of setbacks and severe budget overruns. The system has never carried a crew before.

Returning to the moon has been a priority for President Donald Trump since his first term, and the current administration has placed renewed emphasis on dominating the intensifying space race between the U.S. and China. Chinese officials have pledged to land their own astronauts on the lunar surface by 2030.

Beyond the geopolitical implications, the Artemis II mission is designed to usher in a new era of space exploration, with the goal of eventually establishing bases for long-duration stays on the moon before astronauts someday venture on to Mars.

"Within the next three years, we are going to land American astronauts again on the moon, but this time with the infrastructure to stay," Jared Isaacman, NASA's new administrator, told NBC News in an interview last week after he was sworn in.

For some scientists, the excitement around returning to the moon stems from the prospect of investigating enduring mysteries about the moon's formation and evolution — such as violent collisions in the nascent solar system that created it and where its water originated — which came into focus during the Apollo program in the 1960s and 1970s.

"As you can imagine, lunar scientists have had a lot of pent up questions for decades," said Brett Denevi, a planetary scientist at the Johns Hopkins University Applied Physics Laboratory in Laurel, Maryland.

Answering some of those questions could shed light on similar processes that occurred during our planet's formation, according to Denevi.

"Earth is kind of a terrible record-keeper," she said. "With plate tectonics, weather — these things have just totally erased its very earliest history. But on the moon, you have this terrain that formed about 4.5 billion years ago, and it's just sitting there on the surface for us to explore."

Although the Artemis II mission won't land on the lunar surface, it will test various technologies, docking maneuvers and life-support systems — first in Earth orbit and then in orbit around the moon — that will be essential for future missions. To continue reading, please click [here](#).

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Spirit & Frontier Airlines Merger Talks Spark Once Again Following \$50 Million Lifeline

After much financial turmoil this year, Spirit Airlines has once again reentered merger discussions with Frontier Airlines. As reported by Reuters, these talks are coming as Spirit recently received an immediate lifeline of \$50 million to extend operations, funding that likely prevented the airline from shutting down altogether. Spirit and Frontier first proposed a merger in 2022, but the two parties have yet to reach a firm agreement.

The surprising part of these new reports is Frontier's involvement. Former Frontier CEO Barry Biffle was reportedly cautious about entering a full merger or acquisition agreement with another airline, due to the significant financial and logistical challenges associated with such a move. However, as of Friday, December 12, Biffle exited the role as CEO, and the new reports combined with this development suggest that the company may be more committed to this deal.

Frontier Airlines and Spirit Airlines are reported to have reentered merger discussions. The two carriers previously planned to merge in 2022, but the process was blocked by a higher bid by JetBlue. The merger between JetBlue and Spirit was blocked in 2024, and Spirit remained as an independent airline. Since then, Frontier has proposed two additional bids, both of which were rejected by Spirit Airlines.

Spirit Airlines has filed for bankruptcy twice in 2025, and could have potentially ended operations had it not received a new round of funding. \$50 million was awarded immediately, while another \$50 million is awaiting a further reorganization or a potential sale. This has allowed the company to continue operations, though it remains in dire financial straits.

Frontier Airlines has been hesitant about a merger, but on Friday, Barry Biffle abruptly stepped down as the company's CEO. He will remain in an advisory role until the end of the year, with President James Dempsey being named as interim CEO. With the sudden change in leadership and renewed talks regarding a Spirit Airlines merger, it's clear that this may be a more serious effort by Frontier to acquire Spirit.

While Frontier itself is experiencing financial difficulties, Spirit Airlines is undoubtedly the weaker of the two, and it also has fairly poor brand equity. As such, you might expect that a Frontier merger would result in the Spirit Airlines brand fading away and the yellow planes being repainted. Primarily, the main appeal of a merger with Spirit Airlines, from Frontier's perspective, is assets, namely planes, staff, and airport gates.

Planespotter.net shows that Spirit Airlines is only operating 102 aircraft at present, whereas Frontier operates 172 aircraft. If Frontier were to formally acquire Spirit, it would end up with 279 aircraft, tying it with JetBlue as the US's sixth-largest airline. Both Spirit and Frontier exclusively operate the Airbus A320 family, using Pratt & Whitney-powered A320neos and A321neos, along with the A320-200 and A321-200. However, some models have different engines across the carriers.

Frontier has a more secure financial position, a slightly better brand name, and even a complementary route network with a greater focus on the western part of the US compared to Spirit Airlines. To continue reading, please click [here](#).

L3Harris to Sell Majority Stake in Space Propulsion & Power Business to AE Industrial Partners

L3Harris Technologies (NYSE: LHX) today announced that AE Industrial Partners ("AE Industrial") has agreed to acquire a controlling interest in L3Harris' Space Propulsion and Power Systems business at a total enterprise value of \$845 million.

Transaction closing is expected in the second half of 2026, subject to obtaining regulatory approvals and satisfaction of other customary closing conditions. L3Harris' RS-25 rocket engine business is excluded from the sale. L3Harris will retain a ~40% ownership stake in the new space technology business with AE Industrial.

"L3Harris is strongly committed to the Department of War's (DoW) vision for a faster, more agile defense industrial base while remaining laser-focused on driving value for our shareholders and customers," said Christopher Kubasik, Chairman and CEO, L3Harris. "This transaction further aligns the L3Harris portfolio with DoW core mission priorities."

L3Harris has consistently pursued traditional and non-traditional partnerships to drive business growth and advance critical technologies. Previous space investments of AE Industrial include Firefly Aerospace, RedWire Space and York Space Systems, demonstrating the group's experience with national security and space exploration markets.

Jefferies LLC acted as exclusive financial advisor to L3Harris.

L3Harris is the Trusted Disruptor in defense tech. With customers' mission-critical needs always in mind, our employees deliver end-to-end technology solutions connecting the space, air, land, sea and cyber domains in the interest of national security. Visit [L3Harris.com](https://www.l3harris.com) for more information. To continue reading, please click [here](#).



Bombardier Global 8000 Lands FAA Certification, US Deliveries to Begin

Bombardier's Global 8000 ultra-long-range (and ultra-fast) business twinjet has received Federal Aviation Administration (FAA) certification, formally clearing the way for customer deliveries in the US, the world's biggest market for business aviation.

The approval, announced on December 19, 2025, marks a significant milestone for Bombardier's flagship model, which entered service earlier this month following Transport Canada type certification on November 5. Certification from the European Union Aviation Safety Agency remains pending.

With a top speed of Mach 0.95, the Global 8000 is now the fastest civil aircraft to enter service since the retirement of Concorde in 2003. It also offers a range of 8,000 nautical miles, allowing nonstop flights between more city pairs than any other competing business jet.

FAA certification caps more than a decade of development and flight testing and positions Bombardier to begin delivering the aircraft to eager US-based customers. The first Global 8000 was delivered on December 8 to Canadian entrepreneur Patrick Dovigi, replacing his Global 7500.

Beyond headline speed and range figures, Bombardier is emphasizing comfort and operational flexibility as key differentiators. The Global 8000 features the lowest cabin altitude of any production business jet, measuring just 2,691 feet while cruising at 41,000 feet, making for a less fatiguing journey.

The aircraft's wing design plays a central role in its performance profile. Equipped with advanced leading-edge slats, the Global 8000 is able to access shorter runways and operate from a wider range of airports than its closest competitors, despite its size and range. Bombardier says the jet can serve up to 30% more airports than comparable aircraft in its class.

Power comes from GE's Passport 20 engines, each producing 19,000 pounds of thrust. While the Passport engine was originally certified in 2018, GE modified it to support the Global 8000's higher speed and extended range. The engine recently received European approval, helping clear one of the remaining hurdles toward full EASA certification of the aircraft.

The Global 8000 program builds on the success of the Global 7500, which remains one of the most widely used ultra-long-range business jets in service. During flight testing, a Global 8000 test aircraft briefly exceeded the speed of sound under controlled conditions. To continue reading, please click [here](#).



Moon rush: These Private Spacecraft Will Attempt Lunar Landings in 2026

2026 is shaping up to be a spectacular year for lunar exploration, with a growing fleet of commercial missions set to attempt to land on Earth's celestial neighbor.

It will be a huge year for the moon overall. NASA plans to send humans back to the vicinity of the moon with the Artemis 2 mission no earlier than February, while China, in the second half of the year, aims to land at the lunar south pole and seek out water ice with its robotic Chang'e 7 spacecraft. But it's not only national agencies targeting Earth's companion, as commercial companies are also taking aim with a series of robotic landers at what could be the start of a sustained, more market-driven lunar presence for humanity.

Below are the commercial missions currently targeting lunar landing attempts in 2026, pending launch schedules and mission readiness.

Jeff Bezos's Blue Origin is set to take its first shot at the moon with the Blue Moon Mark 1 pathfinder. The robotic lander is due to launch on a New Glenn rocket from Cape Canaveral as soon as early 2026, the company said in November, soon after the rocket successfully launched NASA's ESCAPEDE Mars mission.

The mission is designed to be a technology demonstration of the Blue Moon Mark 1 cargo lander design, including precision landing systems and propulsion tech that will support later commercial and NASA payload deliveries to the lunar surface, with a capacity of up to 6,600 pounds (3,000 kilograms).

The lander will target the lunar south pole and will carry a NASA SCALPSS payload that will study how the lander's exhaust interacts with the moon's surface during the landing. There's a lot at stake: Blue Origin is a prime contractor for NASA's Human Landing System (HLS) with its Blue Moon lander, which is intended to land astronauts on the moon later this decade, making Mark 1 pathfinder a key rehearsal.

Texas-based Firefly is gearing up to return to the moon one year after its historic landing of Blue Ghost in Mare Crisium on the near side. Blue Ghost M2 is the next step in the company's push to become a repeatable commercial lunar delivery provider. It will fly as part of the NASA Commercial Lunar Payload Services (CLPS) program, while also carrying commercial and international payloads.

Blue Ghost M2 will launch on a SpaceX Falcon 9 rocket no earlier than the second quarter of 2026, aiming to land on the far side of the moon — a feat that only China has achieved to date, with Chang'e 4 in 2019 and Chang'e 6 in 2024. Among six government and commercial payloads will be the Rashid Rover 2 for the United Arab Emirates and a wireless power receiver for Volta Space. To continue reading, please click [here](#).



United Performance Metals: Your Long Product Destination

With one of the most comprehensive bar inventories in the industry, United Performance Metals is here to provide you with the nickel, titanium, stainless steel, cobalt, alloy steel, and cobalt chrome moly you need in long bar form. In house, UPM is equipped with bar saws to handle your size range needs, with cutting tolerances as low as +/- 0.030". These saws have the ability to cut up to 36" diameter bars and toll cutting capacity is available. Our bar products are commonly used across the aerospace, space, defense, fastener, medical, power generation, and oil & gas industries for a range of applications including landing gears, engine parts, orthopedic and dental implants, and drilling equipment.

UPM's products are purchased from the highest quality mills in the world and are fully certified AS9100D with ISO 9001:2015 and DFARS compliant. UPM's customer quality approvals include GE Aircraft Engine (GT 193), General Electric Power, Honeywell, Unison, Boeing, Rolls Royce, Pratt & Whitney (LCS-Appendix 36 and SQAR), Bloom Energy, Siemens, Eaton, LISI Aerospace, Toshiba ASL, SpaceX, Northrop Grumman, McDonnell Douglas, Lockheed Martin, GKN Aerospace, Leonardo, Zimmer/Biomet, NuVasive Spine, ACUMED, and Globus Medical. To learn more about UPM's bar inventory, please click [here](#).



Alloy X	A286	A286 CR 15% - 17%	A286 CR 40% - 60%	R405	Waspaloy CR	Waspaloy 5706	Waspaloy 5708	625
718	718 CR	901	CP Grade 2	Ti-6AL-4V	Ti-6AL-4V ELI	B-16	CrMov	Nitalloy 135
Custom 455	Custom 465	Greek Ascoloy	15-5 PH	17-4 PH	17-4 PH Heat Treated	17-4 PH Precision Ground	316 / 316L	316LS / 316 LVM
321	347	410	422	Alloy 159	L605	MP35N	188	CCM

Visit UPM At These Tradeshow In 2026

United Performance Metals is excited to be exhibiting at the below tradeshow in 2026! We look forward to collaborating with others in the industry and showcasing our full line of high performance metals and alloys, FIRSTCUT+® Processing Services, quality approvals, and custom supply chain solutions. Those attending the shows are encouraged to reach out and stop by our booth to learn how UPM can provide unparalleled value for your business. To visit UPM's website to learn more about our upcoming tradeshow, please click [here](#).

February: Singapore Airshow at Changi Exhibition Centre (2/3-2/8) & MD&M Medtech West in Anaheim, California (2/3-2/5).

March: Aerospace and Defense Suppliers Summit in Seattle, Washington (3/18-3/19).

April: Space Symposium in Colorado Springs, Colorado (4/13-4/16) & Rapid + TCT in Boston, Massachusetts (4/14-4/16).

June: Space Tech Expo in Anaheim, California (6/3-6/4) & OMTEC in Chicago, Illinois (6/9-6/11).

July: Farnborough Airshow in Farnborough, United Kingdom (7/20-7/24).

September: IMTS in Chicago, Illinois (9/14-9/19).

October: ITA USA in Las Vegas, Nevada (10/4-10/7).

November: Formnext in Frankfurt, Germany (11/17-11/20).

December: Aeromart Toulouse in Toulouse, France (12/1-12/3).

