

10 Signs Space Tourism Has Arrived

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Alyssa Carson, 18 and a recent high school grad of Baton Rouge International School in Louisiana, U.S., is headed to Florida Tech this fall to study astrobiology, the scientific exploration of life on earth and in space. Anyone who has met Alyssa knows that this major has been years in the making and is merely a red stepping stone toward her ultimate goal: to visit the planet Mars in 2030, around the time NASA plans to land astronauts on the red planet. Her high school superlative? The teenager most likely to walk on Mars.

Considered the world's youngest astronaut-in-training, Alyssa attended her first space camp at age 7 and went on to attend 19 others, including camps in Turkey and Canada. "Space camp was the best opportunity for me to learn more about space and to get more involved in it," Alyssa told *Forbes* magazine this month. "I got to ride simulators, do simulated missions, build model rockets and learn robotics and aviation."

From there, when she was 12, NASA invited Alyssa to discuss missions to Mars as part of the MER (Mars Exploration Rovers) 10 panel in Washington, D.C. At age 13, she delivered a TEDx Talk in Greece (the first of three). And at 15, Alyssa became the youngest person to be accepted into the prestigious Advanced PoSSUM Space Academy, where she received the certification in applied astronautics, officially making her certified to do a sub-orbital research flight and venture into space. By the way, she also speaks four languages and has some 140,000 Instagram followers.

While Alyssa plans to potentially help NASA study and colonize Mars in the 2030s (she recently said, "Mars remains my ultimate goal, even if I have to wait until the early 2030s for the rocket, technology and crew to be ready"), she has been watching with interest as private industry marches toward recreational space tourism.

Enterprising and rich entrepreneurs have all turned their innovation to the skies. Companies like Virgin Galactic, which has a waiting list of citizens who want to travel to space; Blue Origin, started by Amazon founder Jeff Bezos; and SpaceX, led by Elon Musk, the founder of Tesla, are working in different ways to commercialize space travel. Alyssa just told Virgin Media in July 2019, "The technology is there. It's going to be interesting to see just how soon it happens, but space tourism is the future."

That 'future' is hurtling toward us — and may be happening sooner than we all think. David Erickson, senior fellow and lecturer in Wharton's finance department, recently joined the [Knowledge@Wharton radio show on SiriusXM](#) to discuss a big business deal involving Virgin Galactic that promises to propel the space-tourism industry forward.

Here are 10 signs that mankind is getting closer to taking that next giant leap – recreational space travel:

1. On July 8, 2019, Virgin Galactic, a British spaceflight company that is part of Richard Branson's Virgin Group, announced that it would merge with Social Capital Hedosophia (SCH), a special purpose acquisition company (SPAC) that was formed two years ago with the goal of buying a technology company. It raised \$600 million and had about two years to make an acquisition or funds would go back to investors.
2. This merger will create the world's first and only publicly traded commercial human spaceflight company.
3. Following the merger announcement, Virgin Galactic said that it believes it has "overcome a substantial number of the technical hurdles required to make the company a viable and profitable commercial service." It pointed out that its spaceship, VSS Unity, is the first and only commercial service thus far to have put people in space. The capital provided by SCH will give Virgin Galactic "the support needed to reach commercialization," the

company added, saying it has reached an “inflection point” in the development of commercial spaceflight for a safe experience.

4. Wharton’s Erickson called the deal, which will close in the second half of this year, “a merger that suits both parties.” SCH will take a 49% stake in the combined company, while Virgin Galactic will be able to revive its space mission. The company was previously counting on a \$1 billion investment from Saudi Arabia, but suspended the deal after questions arose around the death of journalist and Saudi critic Jamal Khashoggi.
5. Erickson said SCH’s investment in Virgin Galactic is similar to putting money in “very early stage” and “very speculative biotech companies in which revenue generation is years away.” However, by merging with SCH instead of doing an initial public offering, he said Virgin Galactic could avoid “the scrutiny they would typically face in a two-week IPO road show.”
6. With this merger, Branson’s company will soon have access to lots of capital to invest in its space-tourism activities. After the deal closes, SCH founder and CEO Chamath Palihapitiya plans to invest another \$100 million in the company. Palihapitiya is a Sri Lanka native with a net worth “rumored to be close to \$1 billion,” a fortune he amassed as a senior Facebook executive when the company went public.
7. Virgin Galactic, which had two successful manned space launches earlier this year, already has \$80 million in deposits from more than 600 aspiring space travelers in 60 countries, for a total of \$120 million in potential revenue. Those customers reportedly include pop singer Justin Bieber and actor Leonardo DiCaprio. The company said it intends to offer customers a “unique, multi-day experience” including zero gravity and views of Earth from space. After this year’s launches, about 2,500 people have asked to sign up, Branson told CNBC in an interview.
8. And when it comes to competitors Jeff Bezos and Elon Musk, the space race is on. Blue Origin is planning a crewed space mission in 2019 and seeks to get people to the moon by 2024. Musk wants to take SpaceX to Mars and has set longer-range plans: ferry cargo by 2022 and humans by 2024, build a city in the 2020s and colonize the red planet in the 2030s. SpaceX is already carrying cargo shipments to the International Space Station on its Dragon spacecraft.
9. One of the keys to success is to “demonstrate safety and reliability,” said Iain Boyd, professor of aerospace engineering at the University of Michigan who also joined the K@W SiriusXM radio show. “If the first few space flights of any of these companies go well, “then people will come,” said Boyd. “But if anything goes wrong, it’s going to be very interesting to see if this kind of market can ride that out.”
10. Space tourism is not just a private-company endeavor. Fans of NASA (like Alyssa Carson) will recall that last month the U.S. government space agency announced it wants to let space tourists onto the International Space Station – for a cool \$59 million per trip. This could happen as soon as next year, although limited to two separate trips per year. Welcome to the final frontier.



Alyssa Carson, in a recent photo from YouTube, hopes to travel to Mars with NASA in the 2030s.