

Commercial space race gets crowded behind SpaceX

May 23 2012, By SETH BORENSTEIN , AP Science Writer



In this Tuesday, May 22, 2012 file photo, the SpaceX Falcon 9 rocket lifts off from space launch complex 40 at the Cape Canaveral Air Force Station in Cape Canaveral, Fla. The privately built space capsule that's zipping its way to the International Space Station has also launched something else: A new for-profit space race. (AP Photo/John Raoux)

(AP) -- A privately built space capsule that's zipping its way to the International Space Station has also launched something else: A new for-profit space race.

The capsule called Dragon was due to arrive near the [space](#) station for tests early Thursday and dock on Friday with its load of supplies. Space Exploration Technologies Corp. - run by PayPal co-founder Elon Musk - was hired by NASA to deliver cargo and eventually astronauts to the orbital outpost.

And the space agency is hiring others, too.

Several firms think they can make money in space and are close enough to Musk's company to practically surf in his spaceship's rocket-fueled wake. There are now more companies looking to make money in orbit - at least eight - than major U.S. airlines still flying.

Private space companies have talked for years about ferrying goods and astronauts for NASA, but this is the first time one is actually in orbit and about to make a delivery for the space agency.

"Dragon is not the only entrant in commercial cargo," said Jeff Greason, president of XCOR Aerospace, which specializes in the also busy suborbital marketplace. "They have competitors nipping at their heels."

Still, Dragon's [launch](#) is "the spark that will ignite a flourishing commercial spaceflight marketplace," said Michael Lopez-Alegria, the president of the Commercial [Spaceflight](#) Federation and a former astronaut.

Hiring Musk's SpaceX and other private companies is a key part of NASA's plan to shift focus. Instead of routine flights to the [space station](#) with the now retired space shuttles, NASA is aiming further out to places like asteroids and Mars. After this [test flight](#), SpaceX has a contract with NASA for a dozen delivery runs.

The idea is to "let private industry do what it does best and let NASA tackle the challenging task of pushing the boundary further," NASA Deputy Administrator Lori Garver said last week.

NASA has given seed money and contracts to several companies to push them on their way. But eventually, space missions could launch, dock to a private space station or hotel and return to Earth and not have anything

to do with NASA or any other country's space agency.

Earlier this month, the Hawthorne, Calif.-based SpaceX signed an agreement with Bigelow Aerospace of Nevada which is designing inflatable space stations for research and maybe even tourists. SpaceX and other companies will provide the transportation - like airlines - and Bigelow the place to stay. There are already eight different licensed spaceports in the U.S. where companies can launch from and most of them have no connection to NASA.

Another space launch-and-tourism company, Richard Branson's Virgin Galactic is working separately from NASA and the space station.

If NASA isn't involved, there is one federal agency that is. The Federal Aviation Administration has a commercial space office that licenses private space missions and works with NASA to set safety standards.

An update on some of the closest competitors to [SpaceX](#):

- Orbital Sciences Corp. of Dulles, Va., is in the cargo-only business, but it is closest to launch. It has a NASA contract for \$1.9 billion for eight cargo flights to the space station once its rockets succeed. The early versions of its Antares rocket and Cygnus spaceship are already built, but the company is waiting for its launch pad to be finished at NASA's Wallops Flight Facility in Virginia. A stay-on-the-ground test is aimed for late July, a launch test in the fall and trial run to the space station around November, said spokesman Barron Beneski.

- Alliant Techsystems, headquartered in Arlington, Va., isn't funded by NASA's commercial space program, but has developed the Liberty rocket and passenger spacecraft system. Most of the rocketry and capsule systems have been tested. A key structural test of the rocket's second stage is scheduled for early July, with the first unmanned test

flight in 2014. Tests with a private crew aboard would be in 2015 and it would be ready to ferry NASA material and astronauts in 2016, according to Kent Rominger, a former astronaut and Liberty's program manager.

- Boeing Co. of Chicago has nearly \$113 million in NASA commercial crew funding and just finished its second parachute drop test in the Nevada desert. It has completed 46 of 52 milestones needed before flights, spokeswoman Susan Wells said. A landing airbag test is targeted for the fall. The Boeing [space capsule](#), called a CST-100, will carry astronauts and cargo with three test launches aimed for 2015 and 2016, the last one with a crew on board.

- The Sierra Nevada Corp. of Sparks, Nev., with nearly \$106 million from NASA, is building a mini-shuttle crew vehicle called Dream Chaser with a first flight targeted for 2016 or possibly 2017. The company this year finished landing gear tests and has a full-scale ship for flight testing attached to a helicopter this fall in California.

- The most secretive of the companies, Blue Origin of Kent, Wash., is run by Amazon founder Jeff Bezos and has received \$22 million from NASA. Its crew and cargo vehicle, called New Shepard, would also take tourists to suborbit. Its shell passed wind tunnel tests and its engines are now being test fired at NASA's Stennis Space Center.

More information: NASA commercial program:
<http://www.nasa.gov/offices/c3po/home/index.html>

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