

Amazon flips from Vulcan to Atlas V to launch prototype satellites sooner

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Amazon is so eager to get its first test satellites for its Project Kuiper internet constellation up into space that it has decided to switch rides again.



The two satellites are now scheduled to lift off on a United Launch Alliance Atlas V <u>rocket</u> as early as Sept. 26 from Cape Canaveral Space Force Station's Space Launch Complex 41 in Florida, according to officials with both ULA and Amazon.

The prototype satellites had been looking for a ride to space on ULA's new Vulcan Centaur rocket, which had been aiming for a launch this past May, but the rocket faced delays that won't see it fly until at least late 2023.

The switch to an Atlas V from Vulcan is actually the second time the satellites switched rockets, as originally Amazon looked to send them up before the end of 2022 on startup rocket company ABL Space Systems' RS 1 rocket from Alaska. But that company's rockets also have seen delays.

"Our prototype mission will help us test how the different pieces of our <u>satellite</u> network work together, adding real-world data from space to results from our extensive lab testing, fieldwork, and simulation," Amazon wrote about its plans to launch with ULA. "We'll use findings from the mission to help finalize design, deployment, and operational plans for our commercial satellite system, which will provide reliable, affordable broadband to customers around the world."

The Atlas V ride was one Amazon had already purchased. It's one of nine Atlas V rockets on hold for Amazon's massive 3,236 satellite constellation that aims to compete with the likes of SpaceX's Starlink system.

Amazon in 2022 announced it had struck a deal for up to 83 launches over a five-year span to get its hardware into <u>space</u> with launch providers ULA on its Vulcan Centaur, Jeff Bezos-owned Blue Origin with its indevelopment New Glenn rocket and Arianespace's delayed Ariane 6



rocket. None of those three have launched yet, with Vulcan Centaur the likely closest to realization.

Both Vulcan and New Glenn rockets will launch from Florida's Space Coast while Arianespace launches from French Guinea in South America.

To support the Space Coast launches, Amazon is building out a \$120 million, 100,000-square-foot satellite processing facility at the Kennedy Space Center's former Shuttle Landing Facility. In early 2025, all the Space Coast launches of Project Kuiper satellites will make a pit stop here where they will be fueled up and integrated with the ULA or Blue Origin rocket fairings before heading to their respective launch pads.

Amazon is facing a deadline of July 2026 to get at least half of its constellation into orbit to maintain its license with the Federal Communications Commission.

It's gearing up so that ULA with its remaining eight Atlas rockets and many of the first available of 37 contracted Vulcan launches will be used to try and hit that 1,600-satellite target midway point. With the massive launch order, ULA is also investing in more rocket prep facilities in Cape Canaveral to be able to support about two launches per month by 2025.

Atlas rockets, which can carry about 21,500 pounds to low-Earth orbit, can only bring up a couple dozen of the satellites, said Steve Metayer, Amazon's vice president of Kuiper production operations during a media event in July at the processing facility construction site.

The majority of those are targeting <u>launch</u> in 2024, he said.

Those won't come until Amazon is happy with the results of the



prototype satellites so it can then push full throttle on production at its facility in Kent, Washington, manufacturing up to four satellites a day, he said.

Metayer said the real dent into the 3,226 satellite total will come once the heavy lift Vulcan, New Glenn and Ariane 6 come online. The Vulcan Centaur's capacity, for instance, is nearly three times that of Atlas V for low-Earth orbit.

Amazon's plans are to send up three launches a month when all of the rockets are available, Metayer said.

"We feel we've got a really good commitment to get our constellation built," he said.

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