

Atlas V launches from Cape Canaveral with prototype Amazon satellites

October 9 2023, by Richard Tribou, Orlando Sentinel



Credit: Pixabay/CC0 Public Domain

A United Launch Alliance Atlas V rocket climbed through the Space Coast skies carrying a pair of prototype satellites to orbit on the first of what's planned to be dozens of launches for Amazon.

The Project Kuiper Protoflight mission's goal is to help Amazon nail down how it wants to construct the entirety of its planned 3,236-[satellite](#) constellation that aims to offer global broadband internet service and compete with the likes of SpaceX's Starlink and other satellites systems.

The Atlas V made its 99th trip off the planet launching from Cape Canaveral Space Force Station's Space Launch Complex 41 at 2:06 p.m. at the opening of a two-hour window. It was ULA's 158th mission since it began operations in 2006.

"Bird is away," posted ULA President and CEO Tory Bruno on social media after liftoff. "Hot, straight and normal,"

The payload weights were not revealed as Amazon has been tight-lipped with its prototype designs, but the Atlas V was in its slim 501 configuration meaning it used a 5.4-meter fairing and no external solid rocket boosters to get the payloads to the target 311 mile altitude. The rocket launched with 860,200 pounds of thrust on liftoff and deployment via the Centaur second stage will occur about 18 minutes later. Weight on liftoff with its full load of propellant was 748,149 pounds, according to ULA.

"The prototype mission gives ULA and Amazon practical experience working together ahead of full-scale launches, including processing procedures, payload integration and mission management," ULA posted on its mission blog after liftoff.

This marks only the third launch of 2023 for ULA while SpaceX has already managed 70 successful flights among launch pads in California

and Florida. All of ULA's launches have been from Cape Canaveral with one Delta IV Heavy in June and now its second Atlas V launch. It's the 54th launch of the year from the Space Coast with SpaceX providing 50, ULA three and Relativity Space a lone launch back in March.

ULA's launch frequency is slated to pick up in the next six years as it is contracted to provide the lion's share of launches for Amazon's satellites including nine of the company's remaining 18 Atlas V rockets including Friday's and another 38 on ULA's in-development Vulcan Centaur rocket that could see its first flight before the end of the year.

Amazon is building out a \$120 million satellite processing facility at the Kennedy Space Center's former Shuttle Landing Facility set to begin operations by 2025 where final preps including satellite fueling will take place before being transported to ULA's launch facilities as well as to Jeff Bezos' rocket company Blue Origin on a neighboring pad on the Cape where the in-development New Glenn aims to join the launch party as well.

Amazon founder and billionaire Bezos stepped down as that company's CEO and president in 2021 but remains as its executive chairman. He fully owns Blue Origin and funds it by selling off his Amazon shares each year.

The Project Kuiper launch contract calls for an initial 12 launches on New Glenn with an additional optional 15. Both New Glenn and ULA's Vulcan Centaur rely on Blue Origin's BE-4 engines for launch of their first stage. Vulcan takes two of them while New Glenn needs seven for each launch.

Amazon also has tapped Arianespace and its in-development Ariane 6 rocket for an additional 18 launches and still has contracts for two launches with small [rocket](#) launch provider ABL Space Systems, on

which it had originally planned to send up the prototype satellites, but shifted to ULA after delays. They were supposed to then fly on the first Vulcan flight back in May, but that too was delayed, so Amazon switched to the Atlas V.

Including Friday's launch, Amazon has contracted for up to 94 launches for Project Kuiper: 47 from ULA, up to 27 from Blue Origin, 18 from Arianespace and two from ABL Space Systems.

Its license from the Federal Communications Commission demands half of the 3,236 satellites be placed in orbit by July 31, 2026 and the full constellation by July 31, 2029.

The first operational Project Kuiper satellites are expected to begin launching on the remaining eight Atlas V rockets under contract in 2024 and then shift to the three heavy-lift rockets from ULA, Blue Origin and Arianespace when they come online, but there's a possibility those launches won't commence until 2025.

2023 Orlando Sentinel.

Distributed by Tribune Content Agency, LLC.

Citation: Atlas V launches from Cape Canaveral with prototype Amazon satellites (2023, October 9) retrieved 29 April 2024 from <https://phys.org/news/2023-10-atlas-cape-canaveral-prototype-amazon.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.