Latest launch-contract win suggests Rocket Lab now considered highly reliable

Enlarge / An Electron rocket lifts off in 2019.

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Rocket Lab announced late Tuesday that it had signed another customer to its launch manifest for 2020, a Japanese company named Synspective. Rocket Lab will launch the company's synthetic-aperture-radar satellite (named StriX-α) late this year from its facility in New Zealand.

"We are very pleased to work with Rocket Lab, a pioneer in rocket ventures," the founder and chief executive of Synspective, Motoyuki Arai, said in a news release. "We are also grateful for their flexibility in accepting our requests on the satellite's orbit and launch period."

This was all standard enough. The 150kg StriX-α satellite is near the top end of Electron's capability, but the booster can loft that much mass to Sun-synchronous orbit. To date, the heaviest payload launched by Electron is a 185kg satellite for the Air Force, into a 500km orbit last year.

What Tuesday's announcement *did not* include was the fact that the Japanese company shuffled this launch from a Vega rocket onto Electron. The Vega rocket, which had its first failure in 15 launches last July, has yet to return to flight. The

spaceport it launches from in French Guiana remains closed due to the coronavirus.

Synspective and Arianespace announced a contract to launch StriX-α as a rideshare mission on the European company's Vega vehicle only one year ago, and as part of that deal, they signed a "Strategic Partnership Agreement" to study a future cooperation.

That was significant because Synspective has raised more than $100 million since forming at the beginning of 2018. Eventually, it plans to build out a constellation of 25 satellites to provide global coverage of the planet, with the ability to use synthetic-aperture radar to provide continuous images through clouds and at nighttime. Synspective aims to launch six satellites by 2022 to provide coverage of Asia. Now, Rocket Lab, instead of Arianespace, may be in a position to pick up this launch business.

Not a bus ride

The StriX-α satellite is a prototype vehicle to test technologies for the constellation, heavier than the planned 100kg mass of the final satellite configuration. Launching 25 of these will provide a nice bundle of contracts to some smallsat launch company, which is why Synspective's move to Rocket Lab is intriguing.

The cost for a dedicated launch on Electron starts at $7.5 million. It is not known how much Syspective paid for a rideshare on the Vega rocket, which has a lift capacity of about 1.4 metric tons to Sun-synchronous orbit and costs $37 million according to a US government report.

While he declined to say what pressures had driven Synspective from the Vega rocket, Rocket Lab chief executive Peter Beck told Ars the company had experienced this before. "This is not uncommon for us," said Beck. "We have several different kinds

of customers. Sometimes they have booked on a rideshare mission and it slips out, or they get kicked off, and they come to us with their hair on fire. Or maybe they've booked a ride on a fantasy rocket and realize that it's not going to fly any time soon. Other customers really understand the value of a dedicated launch."

Electron may cost a little more than a rideshare mission, but Rocket Lab can provide a valuable service with a rocket that is ready to go now and can deliver a satellite into a precise orbit. "You wouldn't expect to pay the price of a bus ticket for an Uber," Beck said. In this case, Synspective certainly valued getting their demo satellite into orbit as soon as possible.

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