

Rocket Lab launches first rocket into space from New Zealand site — will Australia follow?

[The World Today](#) By [David Coady](#)



New Zealand have entered the space market — launching a rocket partly made of carbon fibre, with engines made from a 3D printer, into space.

American-New Zealand company Rocket Lab, which was behind the launch, want to take a slice of the booming market for getting small satellites into orbit.

Peter Beck, founder of Rocket Lab, said despite the spacecraft falling short of its goal to reach orbit, they were counting the launch as a success.

"We didn't quite reach orbit — we'll work out exactly why," he said.

"But we got a long, long way there. It was really a fantastic first flight."

During the test the booster's first and second stages separated successfully, however the upper stage failed to reach the desired orbit about 500 kilometres above Earth.

The test launch was Rocket Lab's initial attempt, and they have reported plans for a second test to be run near the end of May.

The Electron rocket is built of carbon composite, designed and manufactured in New Zealand in under four years.

Unlike Space X's Falcon, the Electron has not been designed to be reused, but Rocket Lab predicted they would be built and launched at an unprecedented rate.

"We're all about launch frequency and we're trying to drive towards once a weekly launch," said Mr Beck.

"The trouble with metallic [rockets] is if you start off with sheets of aluminium you have to roll them, friction stir weld them and then paint them.

"Whereas [with] a carbon composite, literally we can laminate it in one hit and make a tank very, very quickly, and we don't need to paint it."

Big demand for small payload rocket launches

Rocket Lab are not aiming to take traditional satellites to space, instead they want to help send up small devices that travel in swarms or constellations.

They could be used for improved weather reporting, internet from space or natural disaster prediction.

Rocket Lab said they already had customers signed up, including NASA.

"We have a very busy 2018, and a business 2019 — and we've got a lot of customers booked and backlogged so it's time to open the throttles," said Mr Beck

With approval to launch up to 120 times a year, Hawke's Bay on New Zealand's east coast proved the perfect launch site.

Geographically the location is perfect for reaching the areas of space that are in high demand.

Australia close behind with launch of CubeSats

Professor Andrew Dempster, director of the Australian Centre for Space Engineering Research, said the Rocket Lab launch was an important milestone.

"We're in a period of what people are calling space 2.0," he said.

He said private companies were dominating an area that was previously the domain of government-run space agencies.

Professor Dempster said he hoped that Australia would follow New Zealand in embracing the aerospace industry.

"The emergence of Rocket Lab has forced New Zealand to create a space agency," he said.

"It's very important they've done what they've done — we're hoping to do something similar in Australia with launches recently of CubeSats."

The first of those small Australian CubeSats were deployed from the International Space Station yesterday.

But engineers from the University of New South Wales have not yet been able to make contact.

It could have been damaged during launch, or the batteries may be flat — but there remains a chance that it could come to life after solar panels recharge it

Extracted from:

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