

2018

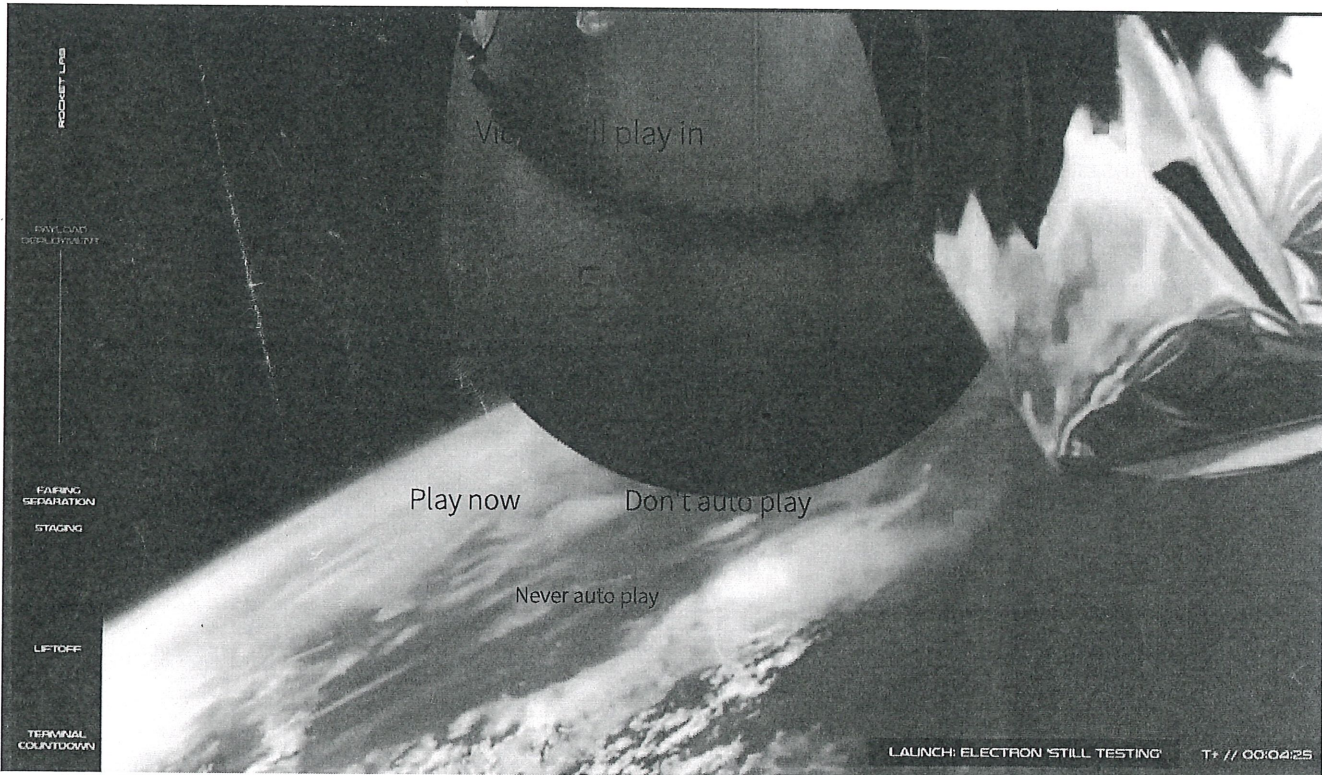
(Ryan, H., 2018)

BUSINESS

Blast off! Rocket Lab successfully reaches orbit on second attempt

21 Jan, 2018 2:36pm

5 minutes to read



Rocket Lab have successfully launched its 'Still Testing' rocket into orbit on April 22. Video/Rocket Lab



By: **Holly Ryan**

Business writer, NZ Herald

holly.ryan@nzherald.co.nz @HollyRoseRyan

An Auckland academic says Rocket Lab "made it look easy" following yesterday's successful launch of a rocket dubbed Still Testing which reached orbit for the first time.

Dr Nicholas Rattenbury from the University of Auckland's Department of Physics said being able to send a rocket to space remains "one of the most challenging technological acts we as a species can accomplish".

"Space is hard. Three words that sum up over fifty years of technological struggle, success, failure, national pride, fervour and a lot — a lot — of money and resources," Mr Rattenbury said.

"Rocket Lab made it look easy. On only their second attempt, the company lofted one of their Electron vehicles to orbit in an apparently flawless launch, deploying its payloads and heralding a new era in New Zealand — and world — history.

"Space remains hard, and while our local launch provider demonstrated its capabilities with aplomb, behind that exemplary performance lies thousands of person-hours, research, development and testing.

"It does go to show what we can achieve with will, drive, determination and support. I look forward to the years ahead as we work towards taking advantage of our new access to space."

Yesterday's launch followed the company's first launch last May, in which the rocket got to space but did not make it to orbit after range safety officials had to kill the flight.

Rocket Lab earlier said it had pinpointed the problem that meant its first Electron rocket was killed before it got to orbit, with the company saying at the time that it was confident the fault had been ironed out.

Read more: Countdown starts for next Rocket Lab launch attempt
2017 a giant leap for Rocket Lab with Mahia launch

In its successful launch today, the company initially said it had reached stage separation, before tweeting the rocket had successfully made it to orbit.

Related articles:

NEW ZEALAND

Record-breaking January could be hottest month ever

21 Jan, 2018 3:49pm
3 minutes to read

Rocket Lab 
@RocketLab



LIFT OFF!

2:43 PM · Jan 21, 2018



 1.3K  297 people are Tweeting about this

Rocket Lab 
@RocketLab



Electron is orbital. Successful payload deployment.
#StillTesting

2:53 PM · Jan 21, 2018



 3.2K  1.1K people are Tweeting about this

There would be a third test launch - into Sun-synchronous orbit of between 300km and 500km above the Earth's surface - before the company could move into commercial missions.

The launch marked the "beginning of a new era in commercial access to space", Rocket Lab founder and chief executive Peter Beck said.

Reaching orbit on a test flight was significant but successfully deploying a customer payload so early in a new rocket programme was almost "unprecedented".

Following successful first and second-stage burns, Electron reached orbit and deployed customer payloads at 8 minutes and 31 seconds after lift-off.

"Rocket Lab was founded on the principle of opening access to space to better understand our planet and improve life on it.

"Today we took a significant step towards that."

In the coming weeks the company's engineers would analyse data from the launch to inform future launches.

Rocket Lab currently had five Electron vehicles in production.

The next launch was expected to take place early in 2018.

"At full production, Rocket Lab expects to launch more than 50 times a year, and is regulated to launch up to 120 times a year, more than any other commercial or government launch provider in history."

Still Testing was carrying a Dove Pioneer Earth-imaging satellite for launch customer Planet, as well as two Lemur-2 satellites for weather and ship-tracking company Spire.

A planned launch was scrapped yesterday after a "rogue" boat foiled plans.

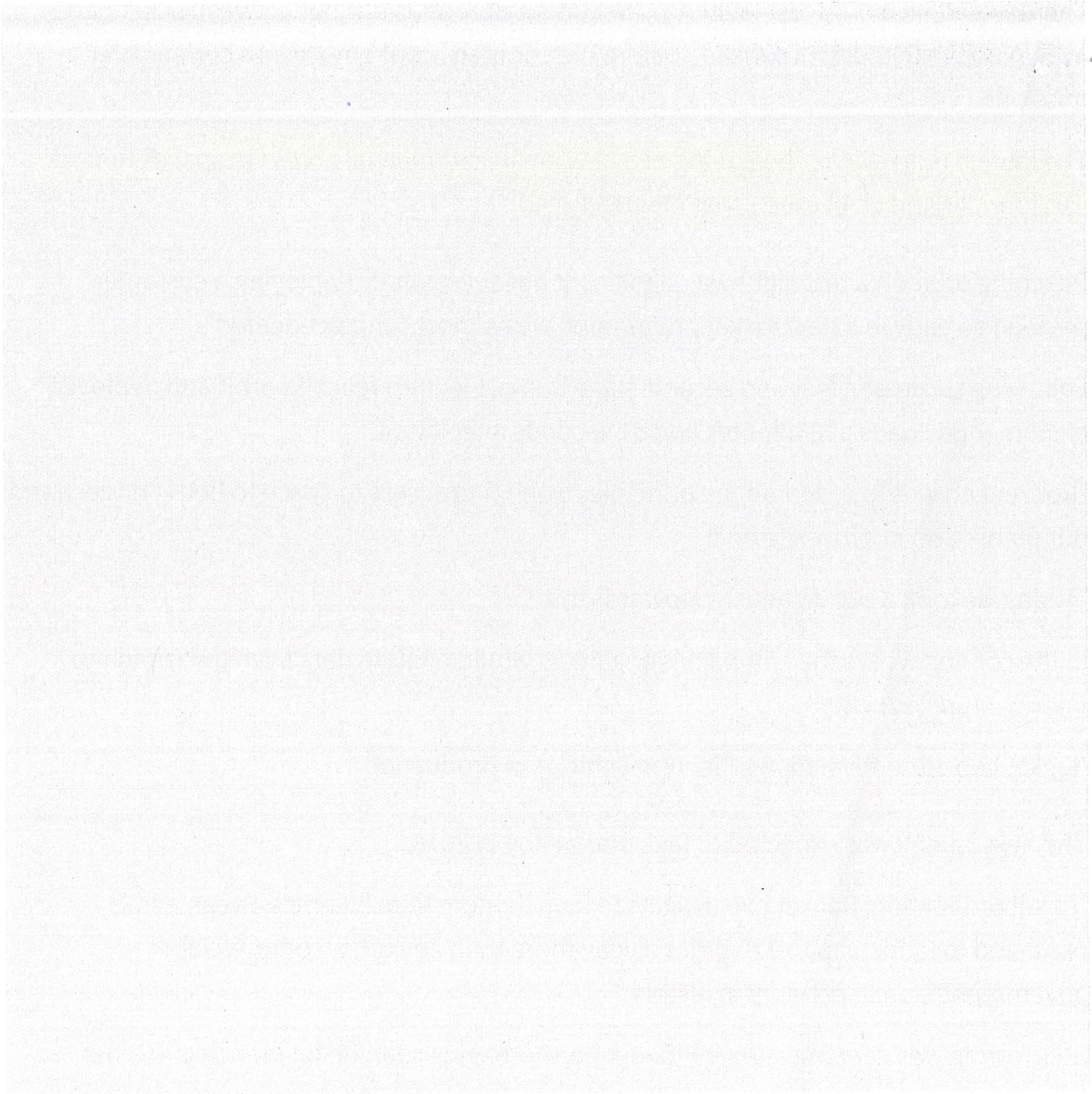
The planned launch yesterday was put on hold less than a minute before scheduled lift-off.

"A rogue ship entered our launch-range area resulting in us having to go into a manually induced hold for the launch.

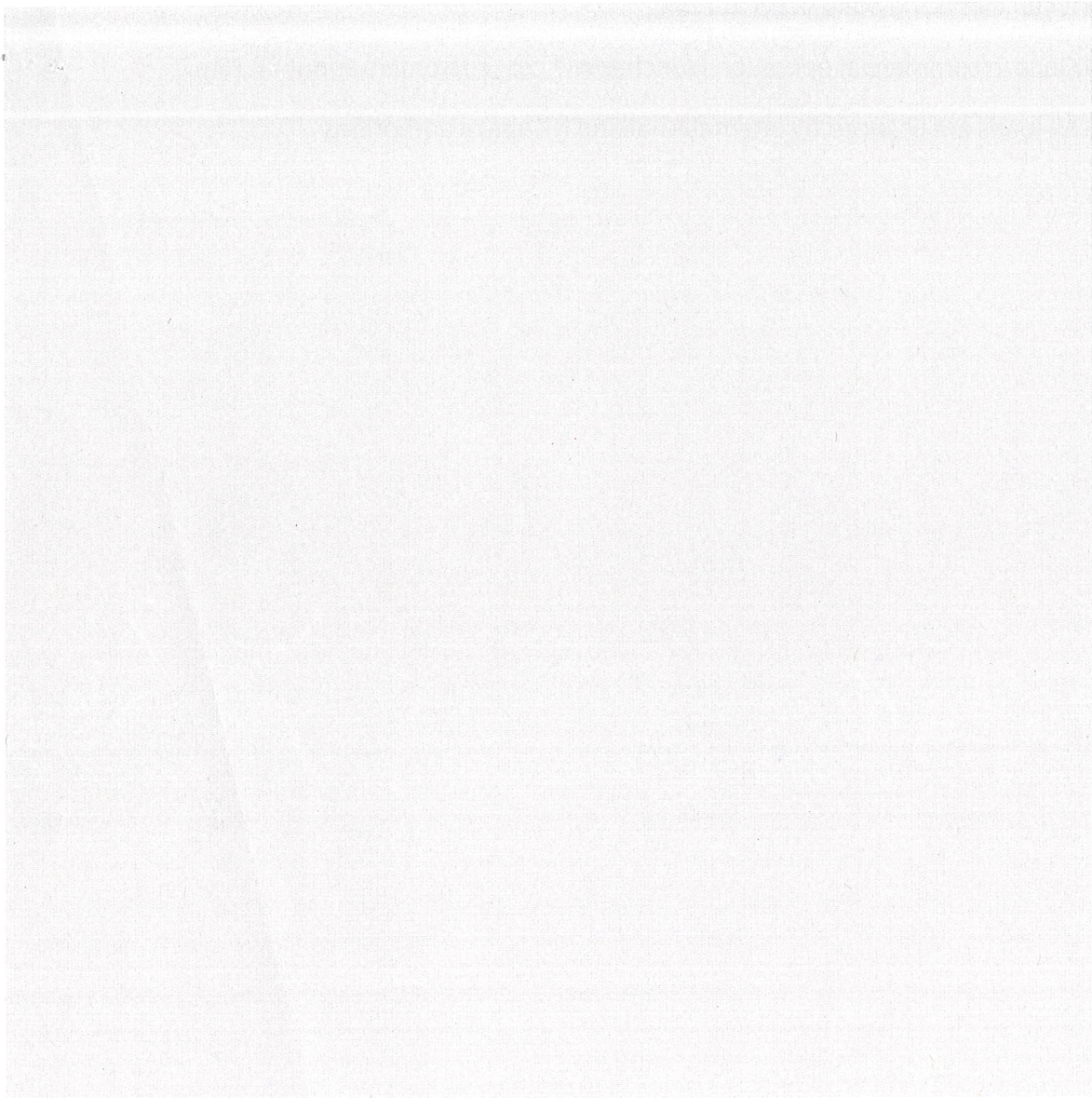
"This is of course for safety reasons as we can't have boats downrange of the vehicle ... we are going to be recycling the vehicle and getting ready for another attempt today," Rocket Lab's mission control in Auckland said.

Rocket Lab had attempted to launch Still Testing in December, but conditions did not allow for it.

The New Zealand-founded company aims to put small satellites into space at a fraction of the cost of established rivals.



The Electron rocket launches at Mahia. Photo / via YouTube



The first stage detaches. Photo / via YouTube

THE ROCKET

- The Electron rocket weighs more than 12 tonnes at lift-off - about the same as a double-decker bus
- Its nine Rutherford engines produce enough thrust to lift that from a standing start
- Power to weight, it is the most powerful machine in New Zealand
- It will take about three seconds to clear the four-storey launch tower
- It will climb to more than 10,600m in a minute
- Once past the thicker parts of the atmosphere it will reach 27,000km/h
- Stage 1 of Electron separates after two and a half minutes
- After just over eight minutes Electron reaches orbit about 500km above the earth
- At eight and a half minutes payload separates from the launch vehicle

- It can carry a payload of up to 225kg
- Once in commercial operation launches will cost customers about \$7.16m.
- All loads are licenced by international and NZ space authorities