OWL NIGHT LONG

PRESS KIT | NET 10 MARCH 2024

Rocket Lab USA, Inc.
rocketlabusa.com

ROCKETLAB

LAUNCH INFORMATION

LAUNCH SITE

Launch Complex 1 – Pad B
Mahia, New Zealand.

LAUNCH WINDOW

Launch window extends from
March 10th through March 22nd, 2024.

Time Zone	Window Open
NZDT	03:00-04:15 10 March
UTC	14:00-15:15 9 March
EST	09:00-10:15 9 March
EDT	10:00-11:15 10 March
PST	06:00-07:15 9 March
PDT	07:00-08:15 10 March

ORBIT

561 km
Sun Synchronous Orbit

SATELLITES

1
Strix-3

INCLINATION

97
Degrees

CUSTOMER

Synspective

MISSION OVERVIEW

About ‘Owl Night Long’

The ‘Owl Night Long’ mission is scheduled to launch from Pad B at Launch Complex 1 in Mahia, New Zealand, and will carry a single satellite for Synspective.

Synspective MIssion: ‘The Owl Spreads Its Wings’
Launch Complex 1, Sept 2022

Synspective Satellite
Rocket Lab Clearnroom, Launch Complex 1, Mahia, NZ

Electron will carry the Strix-3 satellite to a Sun Synchronous Orbit where it will join a constellation of the other StriX-series satellite from Synspective, a Japanese Earth-imaging company.

The StriX-series satellites are a Synthetic Aperture Radar, or SAR, spacecraft that can image millimeter-level changes to the Earth’s surface from space, independent of weather conditions at any time day or night. The constellation to return to any spot on the globe every 12 hours.

SAR is an active system that transmits microwave pulses towards the Earth’s surface and receives reflective signals back to create an image of the target area.

The StriX-series satellites are wide-bodied and take advantage of Electron’s expanded fairing options, specifically customized to meet the demands of the customer. In order to maintain the integrity of the satellite by reducing radiation exposure before deployment, the Kick Stage will perform an advanced mid-mission maneuver to shield the satellite. One of the many reasons Electron is one of the best rockets to meet specific needs.

The mission will be Rocket Lab’s third launch of 2024 and the 45th Electron launch overall.

ROCKET LAB & SYNSPECTIVE

'Owl Night Long' is the fourth launch mission between Rocket Lab and Synspective. In 2023, Rocket Lab announced an expanded multi-launch contract of six launches with Synspective to build their SAR constellation. To date, Rocket Lab has been the sole launch provider to deliver Synspective's satellites to orbit.

The Owl's Night Begins

The first launch between Rocket Lab and Synspective was named 'The Owl's Night Begins.' This was Electron's 17th mission and took place on Dec. 15, 2020. To meet the needs of this mission, Rocket Lab introduced expanded fairing options, allowing customization to carry different types of spacecraft to orbit. The mission carried Synspective's StriX-α satellite to orbit.

The Owl's Night Continues

The launch partnership continued when Rocket Lab carried Synspective's StriX- β to orbit on Feb. 15, 2022. The mission, called 'The Owl's Night Continues' was Electron's 24th mission and the first mission to ever launch from Pad B at Launch Complex 1.

The Owl Spreads Its Wings

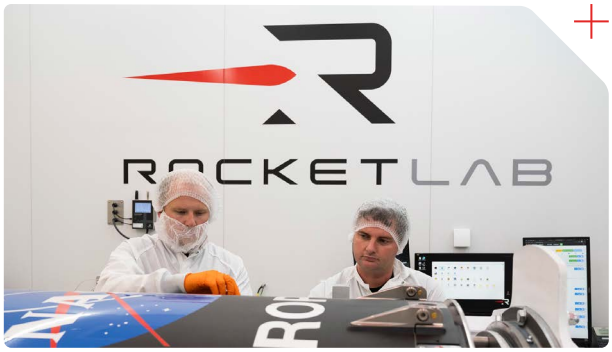
On Sept. 14, 2022, Rocket Lab's third mission for Synspective took to the skies carrying the StriX-1 satellite. 'The Owl Spreads its Wings' mission was a landmark mission for Rocket Lab – it was the 30th Electron mission, carried the 300th Rutherford engine, and marked 150 satellites delivered to space.

LAUNCH SITE OVERVIEW

Rocket Lab Launch Complex-1
Mahia, New Zealand

> ‘Owl Night Long’ will lift off from Launch Complex 1 Pad B on New Zealand’s Mahia Peninsula.

An FAA-licensed spaceport, Launch Complex 1 can provide up to 120 launch opportunities every year. From the site it is possible to reach orbital inclinations from sun-synchronous through to 30 degrees, enabling a wide spectrum of inclinations to service the majority of the satellite industry’s missions to low Earth orbit.



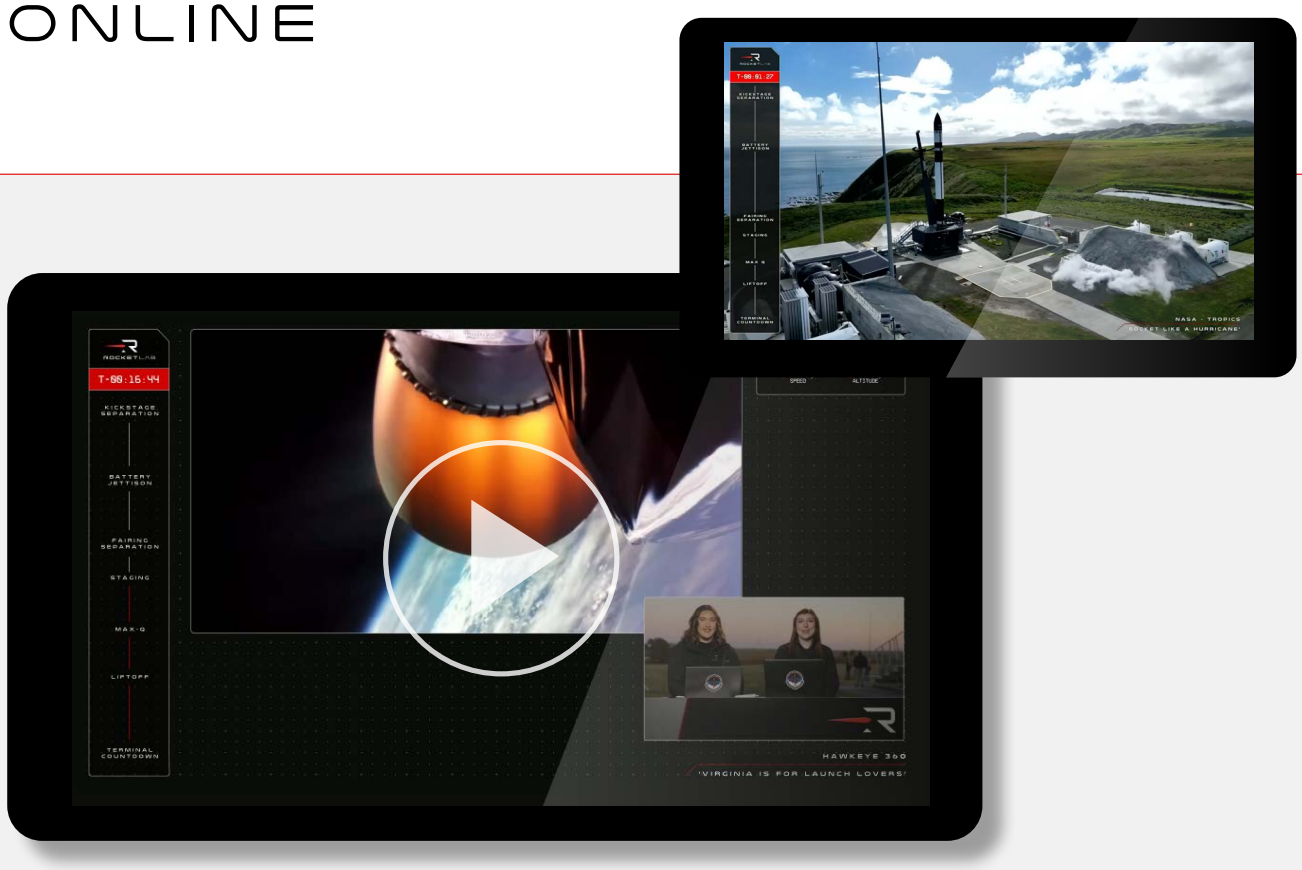
Located within Launch Complex 1 are Rocket Lab’s private range control facilities, two 100K satellite cleanrooms, a launch vehicle assembly facility which can process multiple Electrons at once, and administrative offices.

Operating a private orbital launch site alongside its own range and mission control centres allows Rocket Lab to reduce the overhead costs per mission, resulting in a cost-effective launch service for satellite operators.

In addition to Launch Complex 1, Rocket Lab operates an additional launch site, Launch Complex 2, at the Mid-Atlantic Regional Spaceport within NASA’s Wallops Flight Facility on Virginia’s Eastern Shore. Launch Complex 2 can support up to 12 missions per year.

By operating two launch complexes in two hemispheres, Rocket Lab provides customers with flexible, responsive launch opportunities.

VIEWING A LAUNCH ONLINE



LIVE STREAM

The live stream is viewable at:

rocketlabusa.com/live-stream

LAUNCH FOOTAGE & IMAGES

Images and footage of "Owl Night Long" launch will be available shortly after a successful mission at:

www.flickr.com/photos/rocketlab

UPDATES

For information on launch day visit:

rocketlabusa.com/next-mission

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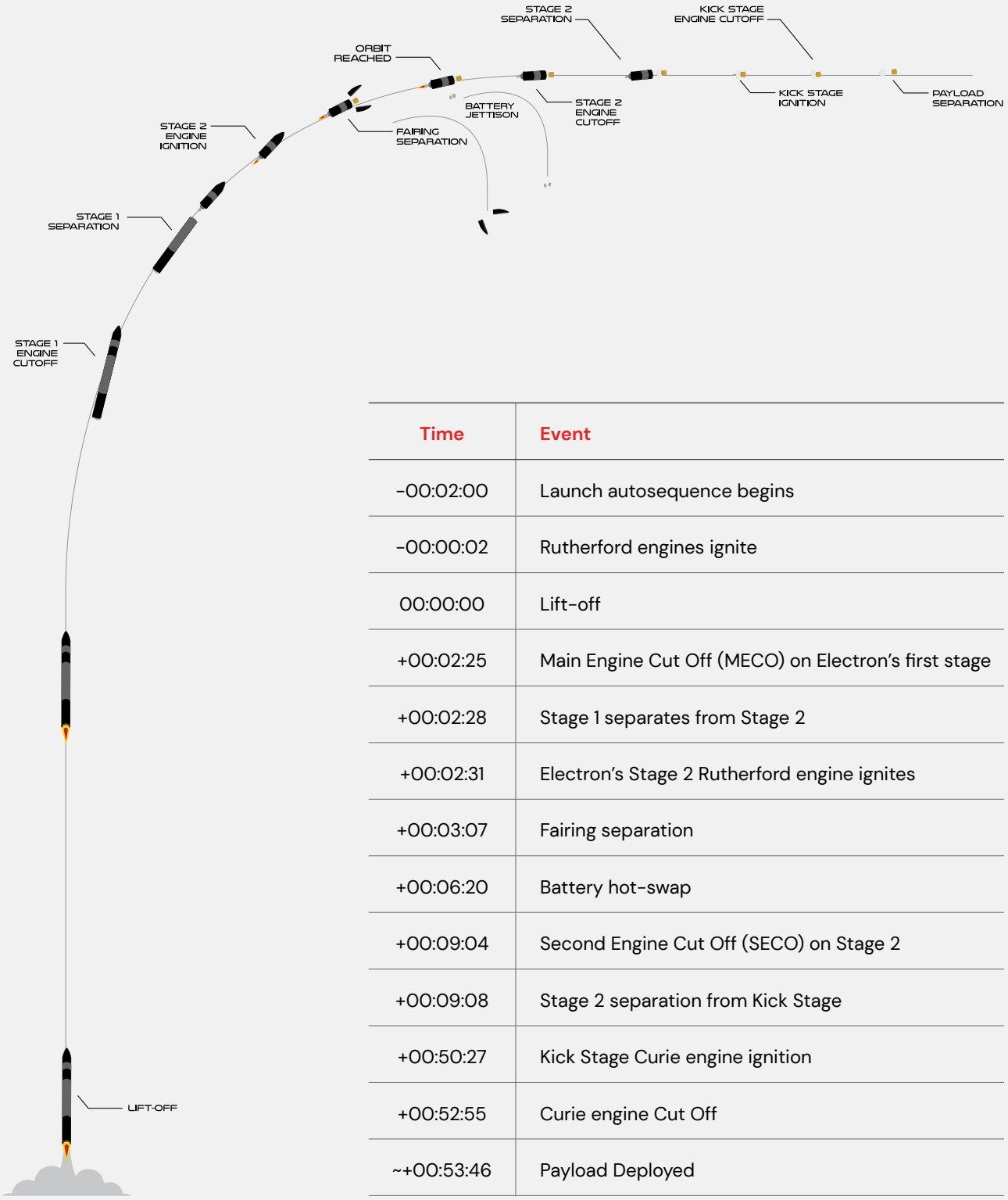
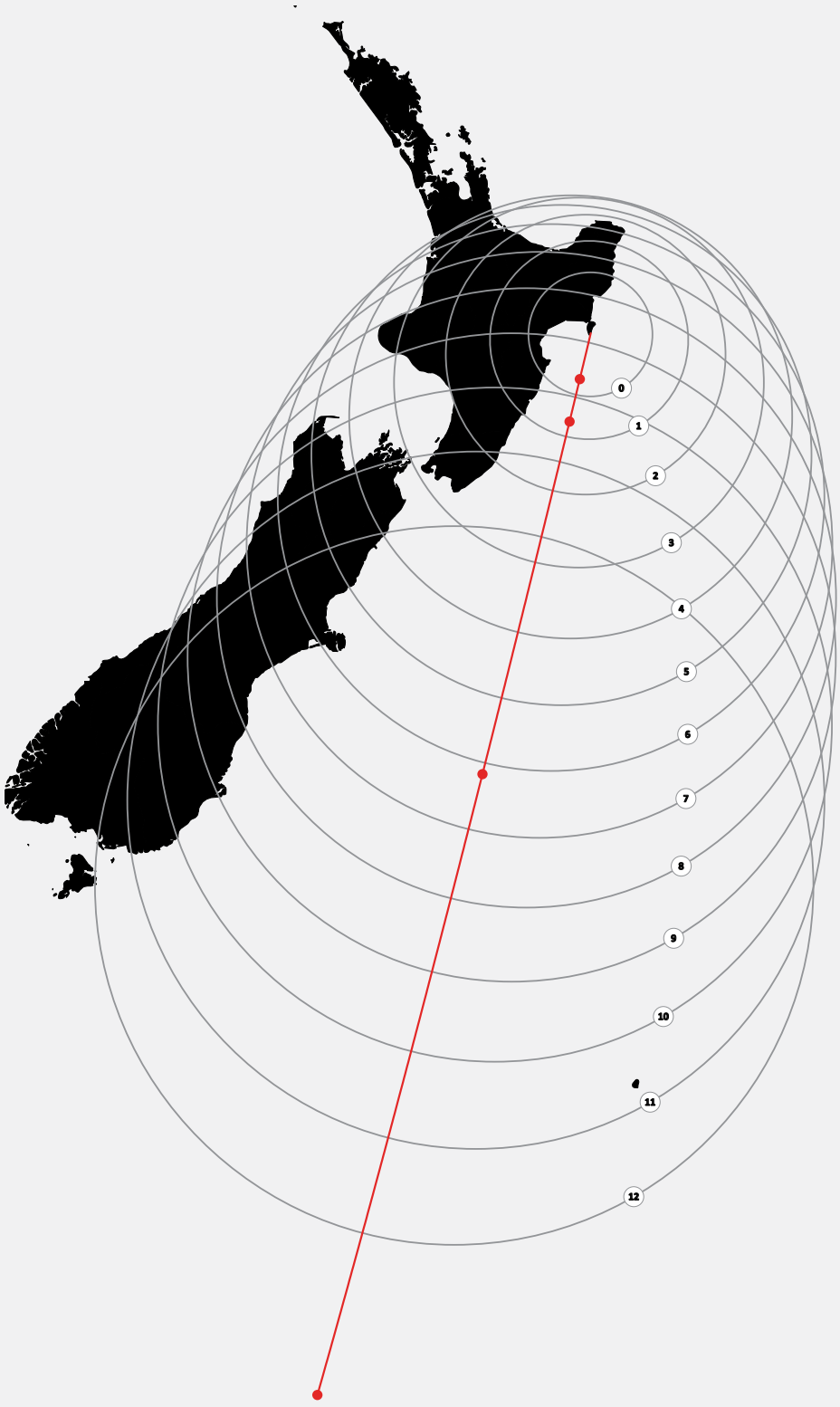
TIMELINE OF LAUNCH EVENTS



Time	Event
-00:02:00	Launch autosequence begins
-00:00:02	Rutherford engines ignite
00:00:00	Lift-off
+00:02:25	Main Engine Cut Off (MECO) on Electron's first stage
+00:02:28	Stage 1 separates from Stage 2
+00:02:31	Electron's Stage 2 Rutherford engine ignites
+00:03:07	Fairing separation
+00:06:20	Battery hot-swap
+00:09:04	Second Engine Cut Off (SECO) on Stage 2
+00:09:08	Stage 2 separation from Kick Stage
+00:50:27	Kick Stage Curie engine ignition
+00:52:55	Curie engine Cut Off
~+00:53:46	Payload Deployed

VIEWING A LAUNCH IN PERSON



Marker	Mission Time
1	T+ 01:00
2	T+ 01:30
3	T+ 02:00
4	T+ 02:30
5	T+ 03:00
6	T+ 03:30
7	T+ 04:00
8	T+ 04:30
9	T+ 05:00
10	T+ 05:30
11	T+ 06:00
12	T+ 06:30
13	T+ 07:00
14	T+ 07:30
15	T+ 08:00
16	T+ 08:30
17	T+ 09:00

Note: Numbers apply to the centre of the circle.

..."owl night long"

ELECTRON LAUNCH VEHICLE

OVERALL

LENGTH
18m

DIAMETER (MAX)
1.2m

STAGES
2 + Kick Stage

VEHICLE MASS (LIFT-OFF)
13,000kg

MATERIAL/STRUCTURE
Carbon Fiber Composite/Monocoque

PROPELLANT
LOX/Kerosene

PAYLOAD

NOMINAL PAYLOAD
320kg / 440lbm To 500km

FAIRING DIAMETER
1.2m

FAIRING HEIGHT
2.5m

FAIRING SEP SYSTEM
Pneumatic Unlocking, Springs

STAGE 2

PROPULSION
1x Rutherford Vacuum Engine

THRUST
5800 LBF Vacuum

ISP
343 Sec

INTERSTAGE

SEPARATION SYSTEM
Pneumatic Pusher

STAGE 1

PROPULSION
9x Rutherford Sea Level Engines

THRUST
5600 LBF Sea Level (Per Engine)

ISP
311 Sec

ROCKETLAB

CONTACT US

rocketlabusa.com

media@rocketlabusa.com

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@rocketlab

RocketLabUSA

facebook.com/rocketlabusa