



OWL THE WAY UP

PRESS KIT | NET DECEMBER 18 2024

Rocket Lab USA, Inc.
rocketlabusa.com



LAUNCH INFORMATION



MISSION

Rocket Lab will launch a dedicated mission for Synspective, a Japanese Earth observation company.



LAUNCH SITE

Launch Complex 1 – Pad B
Mahia, New Zealand.



LAUNCH WINDOW

The launch window opens on December 18th NZT and extends into late December.

Time Zone	Window Open
NZT	03:00 – 04:15 AM
UTC	14:00 – 15:15 PM
EST	09:00 – 10:15 AM
PST	06:00 – 07:15 AM



ORBIT

574 km

Circular Earth orbit



SATELLITES

1

StriX satellite



INCLINATION

97

Degrees



CUSTOMER

Synspective

MISSION OVERVIEW

About 'Owl The Way Up'

The 'Owl The Way Up' mission is scheduled to launch from Rocket Lab Launch Complex 1 for Synspecive, a Japanese Earth observation company deploying a constellation of synthetic aperture radar (SAR) satellites designed to deliver imagery that can detect millimetre-level changes to the Earth's surface from space.



The mission will be the sixth launch of a total of 16 launches on Electron for Synspecive. Rocket Lab's first launch for the company was in December 2020.

'Owl The Way Up' will deploy a single Synspecive StriX series satellite to join its existing constellation of Synthetic Aperture Radar (SAR) satellites in Low Earth Orbit, all of which have been deployed to space by Electron. In addition to deploying the single StriX satellite to space for this mission, Rocket Lab will perform an advanced mid-mission maneuver with Electron's Kick Stage to shield the satellite from the sun and reduce radiation exposure.



SYNSPECTIVE OVERVIEW



Synspective

About Synspective

Synspective is an end-to-end SAR satellite data and solutions provider with a mission to realize a learning world for people to expand their capabilities and make tangible progress with new data and technologies.

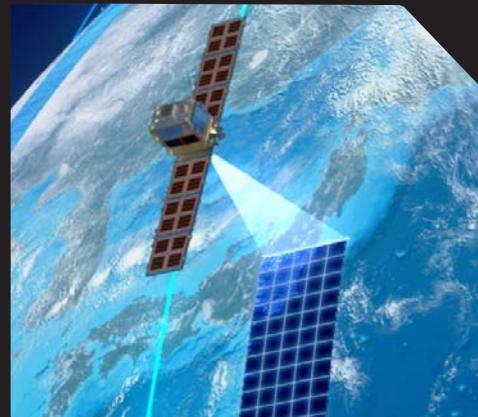
With a SAR satellite constellation that enables high-frequency and high-resolution Earth observation, Synspective delivers satellite data and various solutions that combine SAR and Internet-of-Things (IoT) data with machine learning and data science techniques.



Olympic Dam / Australia
2022/09/12 | StriX-B / StripMap



Venice / Italy
2022/12/12 | StriX-1 / StripMap



Synspective's small SAR satellites, StriX, are equipped with a SAR sensor which can observe the Earth's surface in any weather condition day or night. Not affected by clouds or rain, SAR is suitable for persistent monitoring of disasters and detailed changes to secure critical infrastructure and other facilities. Example use cases include:

- detecting anomalies in road, rail, energy and other infrastructure, resulting in lower maintenance costs and accident risk,
- monitoring crop growth conditions and analyzing soil and vegetation health to help reduce costs and increase efficiency for farmers,
- detecting illegal logging and fishing in the most remote parts of the world,
- providing rapid damage assessment after flooding, landslides and volcanic eruptions, as well as risk assessment for land subsidence,
- enabling the persistent monitoring of maritime traffic, border activities and other potential security threats, and advances maritime domain awareness,
- analyzing tree cover to calculate CO2 absorption and carbon credits.

SYNSPECTIVE MISSIONS OVERVIEW

This mission will be Rocket Lab's sixth launch of a total of 16 launches on Electron for Synspecive.

'The Owl's Night Begins'
LAUNCHED: 15 DEC 2020



'The Owl's Night Continues'
LAUNCHED: 28 FEB 2022



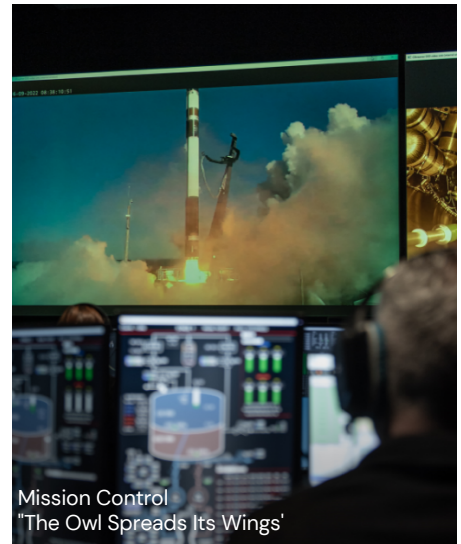
'The Owl Spreads Its Wings'
LAUNCHED: 15 SEPT 2022



'Owl Night Long'
LAUNCHED: 14 MAR 2024



'Owl For One, One For Owl'
LAUNCHED: 3 AUG 2024



LAUNCH SITE OVERVIEW

Rocket Lab Launch Complex-1
Mahia, New Zealand



'Owl The Way Up' will lift off from Launch Complex 1 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](https://rocketlabusa.com/live-stream)

LAUNCH FOOTAGE & IMAGES

Images and footage of 'Owl The Way Up' launch will be available shortly after a successful mission at:

www.flickr.com/photos/rocketlab

UPDATES

For information on launch day visit:

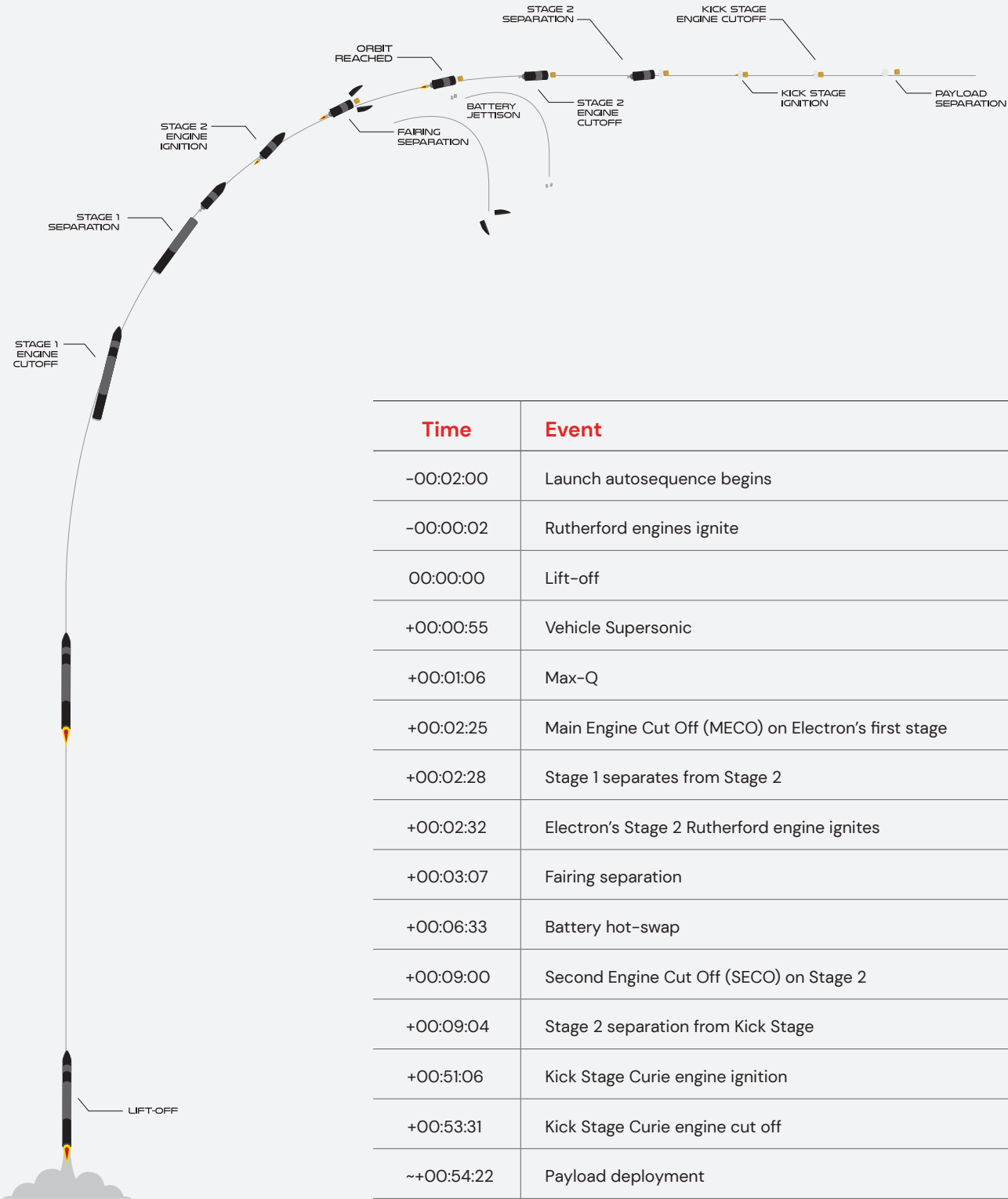
rocketlabusa.com/next-mission

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TIMELINE OF LAUNCH EVENTS



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

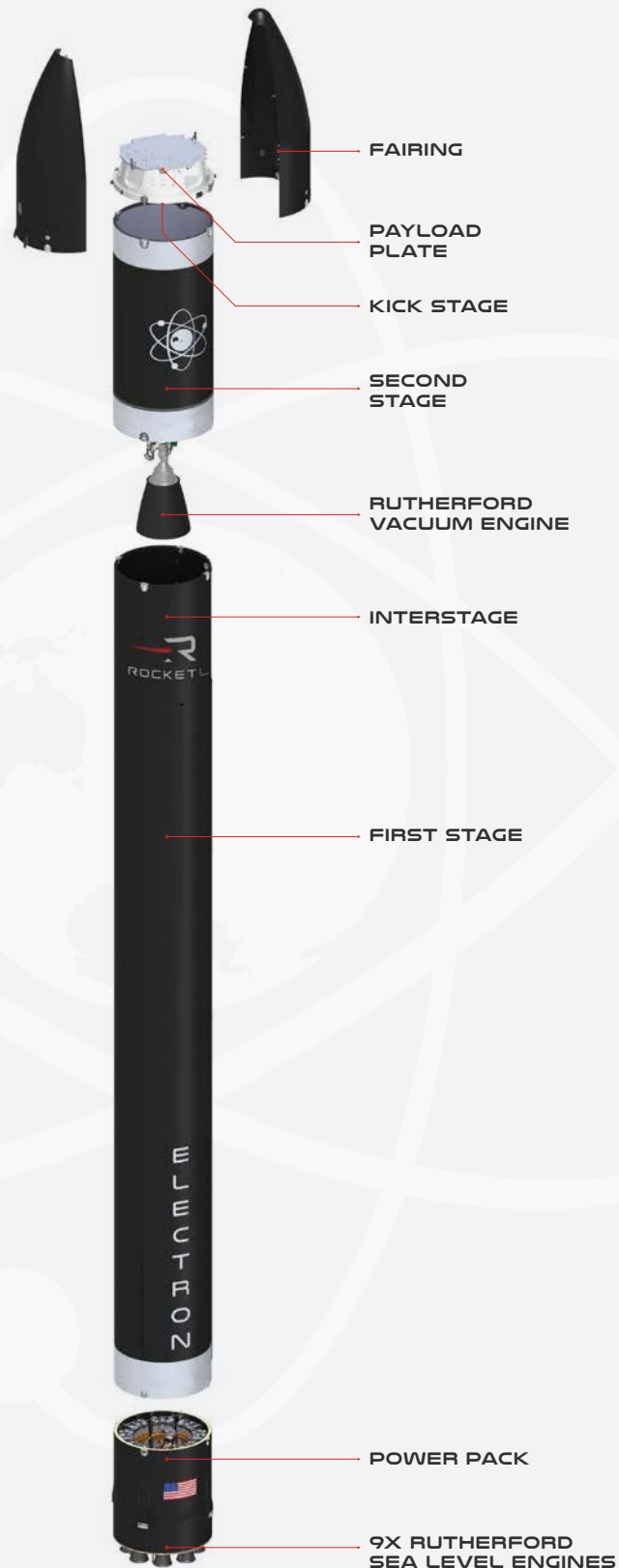
9x Rutherford Sea Level Engines

THRUST


5600 LBF Sea Level (Per Engine)


ISP

311 Sec





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