WITHOUT MISSION A BEAT

PRESS KIT | NET 1 APRIL UTC

Rocket Lab USA, Inc.
rocketlabusa.com

ROCKETLAB

LAUNCH INFORMATION

LAUNCH WINDOW

The launch window opens no earlier than 1 April UTC 2022.

DAILY LAUNCH OPPORTUNITY

The opening of the launch window for this mission will shift slightly each day of the launch period.

NZ	
02 April	01:35
03 April	01:10
03 April	23:50
04 April	23:25
05 April	23:05
06 April	22:40
07 April	22:20
08 April	21:55
09 April	21:35
10 April	21:10
11 April	20:50
12 April	20:25
13 April	20:05
14 April	19:40

UTC	
01 April	12:35
02 April	12:10
03 April	11:50
04 April	11:25
05 April	11:05
06 April	10:40
07 April	10:20
08 April	09:55
09 April	09:35
10 April	09:10
11 April	08:50
12 April	08:25
13 April	08:05
14 April	07:40

ET	
01 April	08:35
02 April	08:10
03 April	07:50
04 April	07:25
05 April	07:05
06 April	06:40
07 April	06:20
08 April	05:55
09 April	05:35
10 April	05:10
11 April	04:50
12 April	04:25
13 April	04:05
14 April	03:40

PT	
01 April	05:35
02 April	05:10
03 April	04:50
04 April	04:25
05 April	04:05
06 April	03:40
07 April	03:20
08 April	02:55
09 April	02:35
10 April	02:10
11 April	01:50
12 April	01:25
13 April	01:05
14 April	00:40

LAUNCH SITE

LC-1 A

Mahia, New Zealand

ORBIT

430km

SATELLITES

2

CUSTOMER

BlackSky

Dedicated mission

MISSION OVERVIEW

ABOUT 'WITHOUT MISSION A BEAT'

Launching from Rocket Lab Launch Complex 1 on New Zealand's Mahia Peninsula, the 'Without Mission A Beat' mission will be Rocket Lab's 25th Electron launch.

LAUNCH COMPLEX 1
MAHIA, NEW ZEALAND

Rocket Lab is scheduled to launch the "Without Mission A Beat" mission from Rocket Lab Launch Complex 1 Pad A during a launch window that opens April 1, 2022 UTC. "Without Mission A Beat" will carry a pair of BlackSky rapid-revisit, high-resolution Earth-imaging satellites to low Earth orbit, which will expand BlackSky's constellation to 14 satellites. Rocket Lab has delivered the majority of BlackSky's constellation to orbit on Electron missions since 2019.

"Without Mission A Beat" will be Rocket Lab's 25th Electron launch and will bring the total number of satellites launched by the company to 112. Rocket Lab will not be attempting to recover Electron for this mission.

BLACKSKY, GEN-2 SATELLITES
CLEANROOM, LAUNCH COMPLEX 1, NZ

PAYLOADS ONBOARD ELECTRON: BLACKSKY GEN-2

Electron will deploy two of BlackSky's high-resolution Gen-2 satellites to low Earth orbit that are set to join the rest of BlackSky's growing Earth-imaging constellation. BlackSky's proprietary constellation has one of the highest hourly revisit rates in the world, providing customers with persistent monitoring and change detection over areas of economic activity across the globe.

BlackSky's Spectra AI platform uses cutting-edge machine learning and artificial intelligence techniques to deliver unique first-to-know insights to commercial and government customers. BlackSky is relied upon by some of the most important and demanding government and Global 2000 organizations around the world. As a trusted source for actionable intelligence, BlackSky is supporting critical day-to-day decision-making across a range of applications that include homeland security, supply chain intelligence, crisis management and response, critical infrastructure, and economic intelligence.

The two BlackSky Gen-2 satellites on this mission, along with those previously launched by Rocket Lab for BlackSky, represent the largest number of satellites BlackSky has dedicated to a single launch provider to date.

VIEWING A LAUNCH ONLINE

LIVE STREAM LINKS

The livestream is viewable at:

rocketlabusa.com/live-stream

Webcast will be live approx. T-20 minutes

LAUNCH FOOTAGE & IMAGES

Images and footage of the 'Without Mission A Beat' launch will be available shortly after a successful mission at:

www.rocketlabusa.com/about-us/updates/link-to-rocket-lab-imagery-and-video

UPDATES

For information on launch day visit:

rocketlabusa.com/next-mission

FOLLOW ROCKET LAB:

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VIEWING A LAUNCH IN PERSON

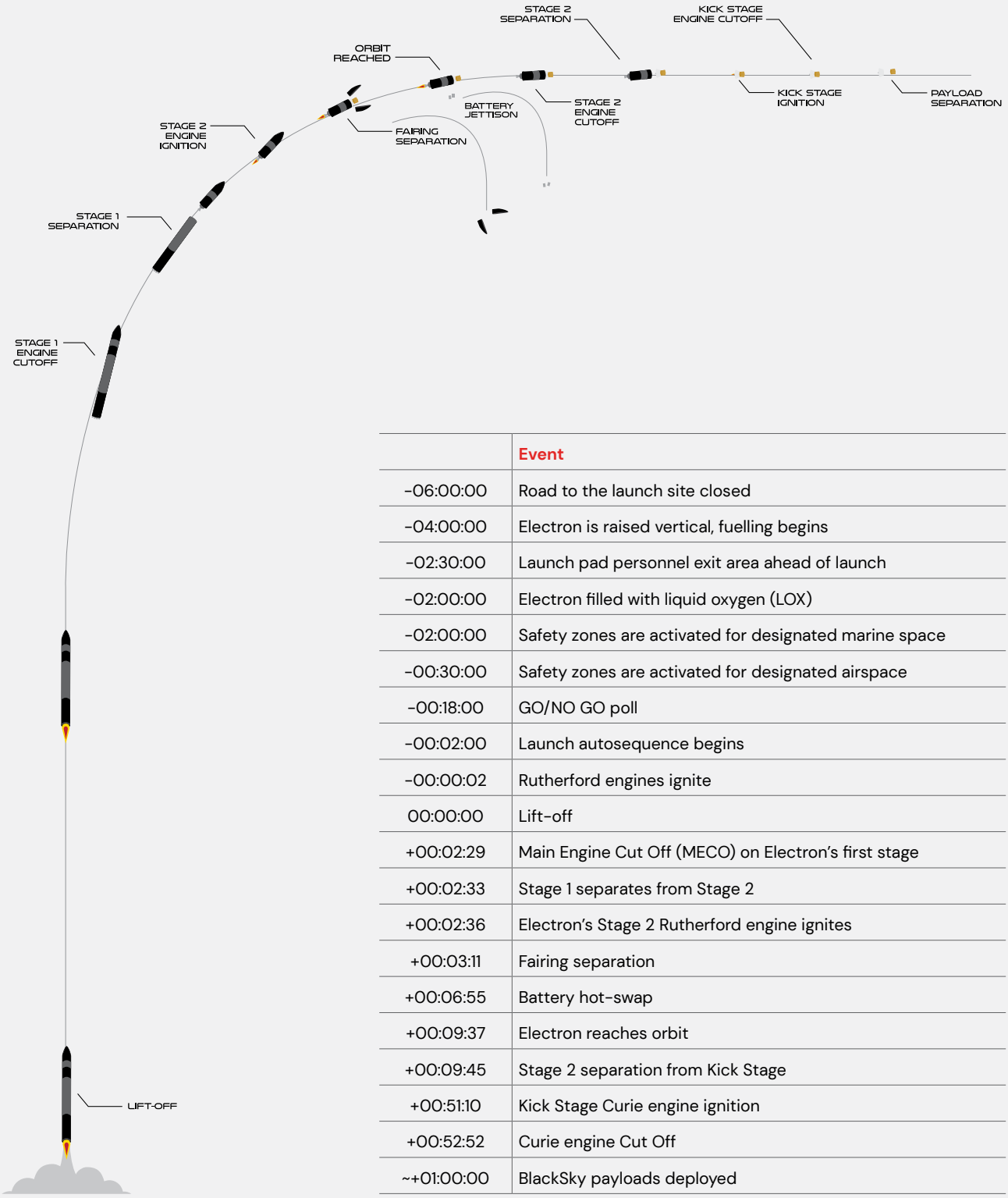
Location

Wairoa District Council has allocated a rocket launch viewing area for the public near Nuhaka, accessible via Blucks Pit Road. Scrubs and postponements are likely during launch windows, so visitors to the Blucks Pit viewing site should anticipate multiple postponements, sometimes across several days.

More information visit

www.visitwairoa.co.nz/welcome-to-wairoa/space-coast-new-zealand

TIMELINE OF LAUNCH EVENTS



	Event
-06:00:00	Road to the launch site closed
-04:00:00	Electron is raised vertical, fuelling begins
-02:30:00	Launch pad personnel exit area ahead of launch
-02:00:00	Electron filled with liquid oxygen (LOX)
-02:00:00	Safety zones are activated for designated marine space
-00:30:00	Safety zones are activated for designated airspace
-00:18:00	GO/NO GO poll
-00:02:00	Launch autosequence begins
-00:00:02	Rutherford engines ignite
00:00:00	Lift-off
+00:02:29	Main Engine Cut Off (MECO) on Electron's first stage
+00:02:33	Stage 1 separates from Stage 2
+00:02:36	Electron's Stage 2 Rutherford engine ignites
+00:03:11	Fairing separation
+00:06:55	Battery hot-swap
+00:09:37	Electron reaches orbit
+00:09:45	Stage 2 separation from Kick Stage
+00:51:10	Kick Stage Curie engine ignition
+00:52:52	Curie engine Cut Off
~+01:00:00	BlackSky payloads deployed

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
200kg / 440lbm To 500km SSO

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

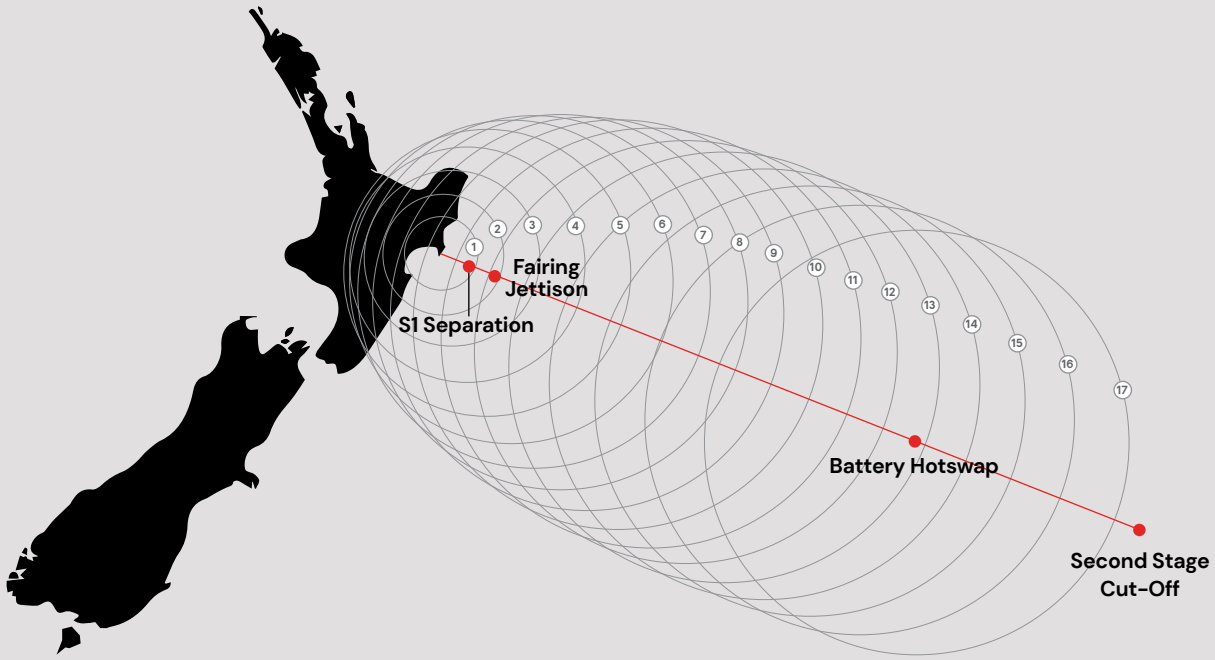
PROPULSION
9x Rutherford Sea Level Engines

THRUST
5600 LBF Sea Level (Per Engine)

ISP
311 Sec

LAUNCH VISIBILITY MAP

WHEN AND WHERE TO SPOT THE LAUNCH



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.

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