ROCKET LAB

WITHOUT MISSION A BEAT

PRESS KIT | NET 14 FEBRUARY 2022

LAUNCH INFORMATION

LAUNCH WINDOW

A 14-day launch window opens no earlier than 14 February 2022.

DAILY LAUNCH OPPORTUNITY

The launch timing for this mission will shift slightly each day of the launch window and is 2 hrs 5 minutes each day.

NZ	
14 Feb	13:55-16:00
15 Feb	13:30-15:35
16 Feb	13:00-15:05
17 Feb	12:35-14:40
18 Feb	12:05-14:10
19 Feb	11:40-13:45
20 Feb	11:15-13:20
21 Feb	10:45-12:50
22 Feb	10:20-12:25
23 Feb	09:50-11:55
24 Feb	09:25-11:30
25 Feb	09:00-11:05
26 Feb	08:30-10:35
27 Feb	08:05-10:10

UTC	
14 Feb	00:55-03:00
15 Feb	00:30-02:35
16 Feb	00:00-02:05
17 Feb	23:35-01:40
18 Feb	23:05-01:10
19 Feb	22:40-00:45
20 Feb	22:15-00:20
21 Feb	21:45-23:50
22 Feb	21:20-23:25
23 Feb	20:50-22:55
24 Feb	20:25-22:30
25 Feb	20:00-22:05
26 Feb	19:30-21:35
27 Feb	19:05-21:10

ET	
13 Feb	19:55-22:00
14 Feb	19:30-21:35
15 Feb	19:00-21:05
16 Feb	18:35-20:40
17 Feb	18:05-20:10
18 Feb	17:40-19:45
19 Feb	17:15-19:20
20 Feb	16:45-18:50
21 Feb	16:20-18:25
22 Feb	15:50-17:55
23 Feb	15:25-17:30
24 Feb	15:00-17:05
25 Feb	14:30-16:35
26 Feb	14:05-16:10

PT	
13 Feb	16:55-19:00
14 Feb	16:30-18:35
15 Feb	16:00-18:05
16 Feb	15:35-17:40
17 Feb	15:05-17:10
18 Feb	14:40-16:45
19 Feb	14:15-16:20
20 Feb	13:45-15:50
21 Feb	13:20-15:25
22 Feb	12:50-14:55
23 Feb	12:25-14:30
24 Feb	12:00-14:05
25 Feb	11:30-13:35
26 Feb	11:05-13:10

ORBIT

430km

SATELLITES

2

INCLINATION

42

Degrees

CUSTOMER

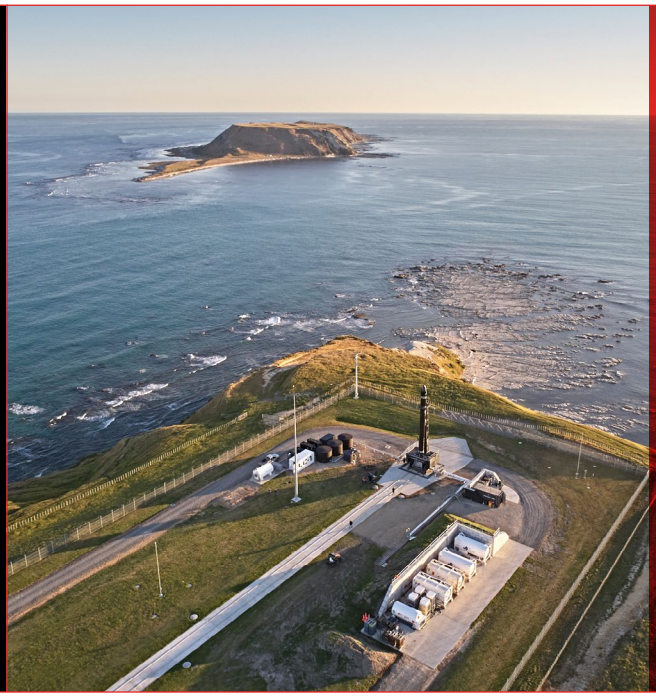
BlackSky

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 24th Electron launch overall and first mission of 2022.



LAUNCH COMPLEX 1
MAHIA, NEW ZEALAND

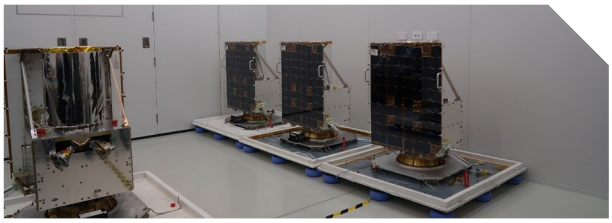
'Without Mission A Beat' will be the fifth and sixth satellites delivered to space by Rocket Lab for BlackSky through Spaceflight Inc. in the past three months, following back-to-back successful launches for BlackSky in November and December 2021.

'Without Mission A Beat' is the latest in a series of back-to-back Electron missions for BlackSky as part of a multi-launch deal actioned in 2021. Electron will deploy two BlackSky Gen-2 Earth-imaging satellites to a 430km circular low Earth orbit, where BlackSky is rapidly developing its satellite constellation to better meet global demand for real-time geospatial analytics.

The "Without Mission A Beat" launch will bring the total number of satellites launched by Rocket Lab to 111.

Rocket Lab will not attempt to recover Electron for this mission.

PAYLOADS ONBOARD ELECTRON: BLACKSKY GEN-2



Electron will deploy two of BlackSky's high-resolution Gen-2 satellites to low Earth orbit, where they're set to join the rest of BlackSky's growing Earth imaging constellation. Having expanded the constellation to 12 satellites by the end of 2021, BlackSky's constellation has the highest revisit rate in the world, capable of 15 hourly visits per day over certain locations on the ground.

Images captured by the satellites are processed through BlackSky's Spectra AI platform, where they are combined with data from satellites and other sources to create automatic status reports on the impact of natural disasters, global shipping traffic, and land use and infrastructure around the world.

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

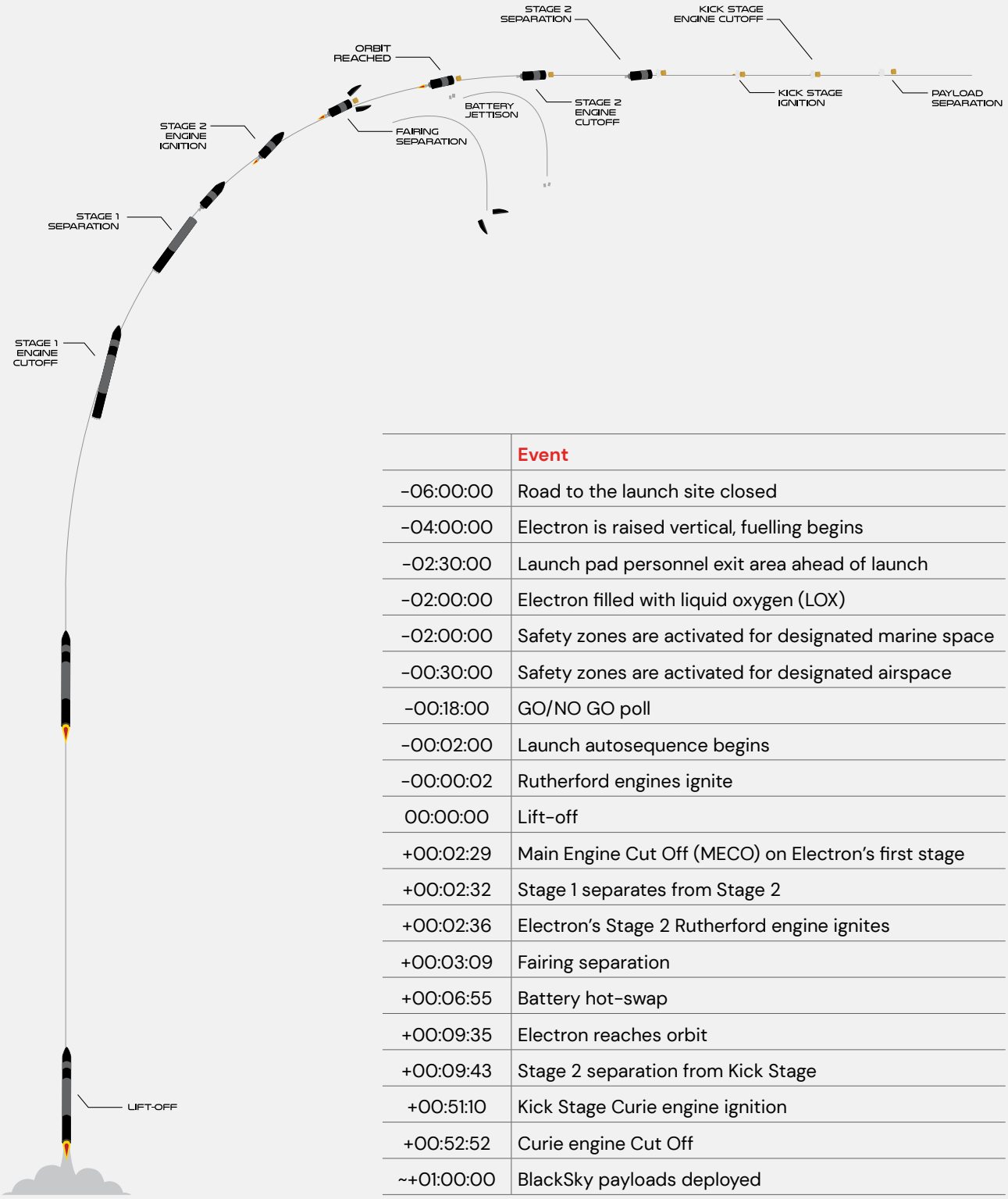
Location

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
+00:02:32	Stage 1 separates from Stage 2
+00:02:36	Electron's Stage 2 Rutherford engine ignites
+00:03:09	Fairing separation
+00:06:55	Battery hot-swap
+00:09:35	Electron reaches orbit
+00:09:43	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

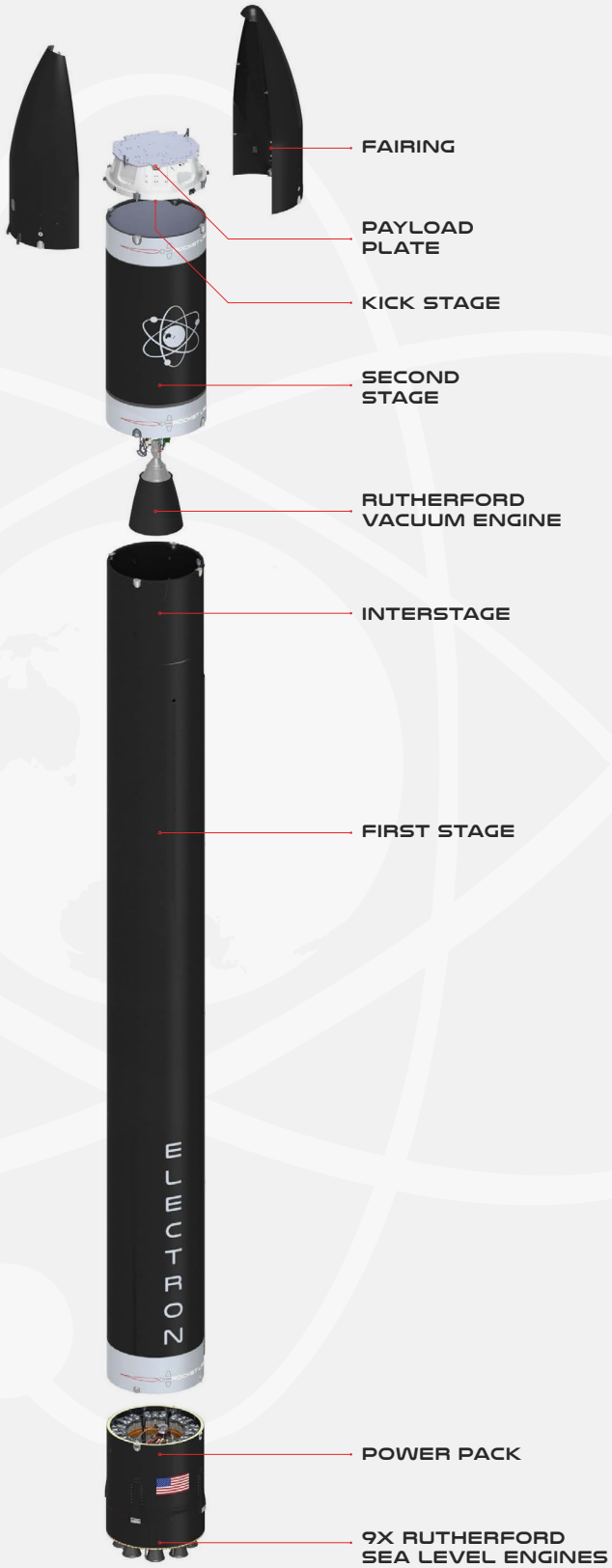
SEPARATION SYSTEM
Pneumatic Pusher

STAGE 1

PROPULSION
9x Rutherford Sea Level Engines

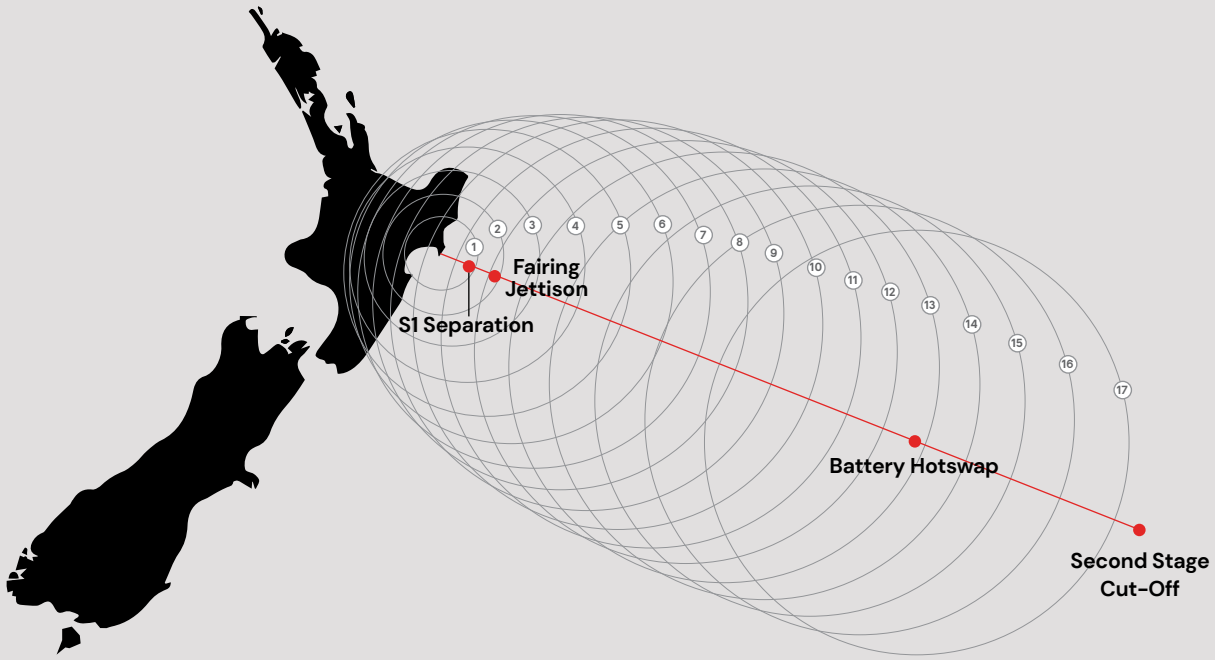
THRUST
5600 LBF Sea Level (Per Engine)

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.

CONTACT US

rocketlabusa.com
media@rocketlabusa.com

CONNECT WITH US

@rocketlab
RocketLabUSA
facebook.com/rocketlabusa

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