

28th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)
Access to Space for Small Satellite Missions (5)

Author: Mr. Lars Hoffman
Rocket Lab, United States

Ms. Murielle Baker
Rocket Lab, New Zealand

KEYNOTE: SPEED TO SPACE: DEDICATED LAUNCH FOR SMALL SATELLITES ON ELECTRON

Abstract

The demand for dedicated small satellite launches has reached an inflection point in recent years as advancements in technologies have led to the capability of small spacecraft to support large-scale civil, commercial, and national security missions and programs. Speed to space has become paramount, and yet industry reports indicate that small satellites booked on commercial missions in the past five years have experienced a median launch delay of 128 days caused by slow launch vehicle development, delays in launch vehicle manufacturing, administrative or programmatic delays, and delays with the development of the payload itself.

As the world's leading small launch services provider, Rocket Lab's dedicated mission service has successfully placed multiple small satellites on orbit within aggressive time frames, on schedule, and at an affordable cost relative to the payload's mission objectives. Dedicated launches onboard Rocket Lab's Electron launch vehicle within the past 18 months include: a launch to low-Earth orbit for German aerospace manufacturer OHB Group, whose single communication microsatellite was successfully deployed to orbit by Rocket Lab within six months of contract signing; the successful deployment of the first of a series of spacecraft for a planned constellation of more than 30 synthetic aperture radar (SAR) small satellites for Japanese commercial start-up Synspective; and a dedicated launch for the United States National Reconnaissance Office (NRO), the first of its kind outside of the United States.

This presentation will detail the successes and lessons learned of Rocket Lab's multiple dedicated launches to date for national security and commercial satellite operators; and summarize Rocket Lab's progression in expanding its capabilities to allow for 100+ launch opportunities every year.