

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Small Launchers: Concepts and Operations (7)

Author: Ms. Sirisha Bandla
Virgin Galactic L.L.C, United States

Mr. Richard DalBello
Virgin Galactic, LLC, United States

Mr. William Pomerantz
Virgin Galactic L.L.C, United States

Mrs. Mandy Vaughn
Virgin Galactic, LLC, United States

Ms. Monica Jan
Virgin Galactic L.L.C, United States

LAUNCHERONE: RESPONSIVE LAUNCH FOR SMALL SATELLITES

Abstract

LauncherOne is a developing space transportation service that will provide affordable, dedicated rides to orbit for small satellites starting late this year. A small satellite operator is typically forced to ride as a secondary payload, constrained to the primary payload's launch schedule and orbit, or pay a significant amount more for a dedicated launch. However, LauncherOne, a small satellite launch vehicle, will soon begin providing frequent, affordable, and dedicated transportation to orbit for small payloads.

LauncherOne is a two stage, liquid propulsion (LOX/RP) rocket launched from a Boeing 747-400. By utilizing air-launch, the system is designed to conduct operations from a variety of locations, removing the complexity associated with operating at specific government operated ranges. LauncherOne will allow customers to select from various launch azimuths, including equatorial inclinations and will increase available orbital launch windows.

The Long Beach, California, USA facility where the team is based has been outfitted with the equipment needed for the manufacture of the LauncherOne rocket, and currently staffs over 250 employees. Four shipsets of vehicle structures have been fabricated and are in final assembly and test. LauncherOne's propulsion system is well into development with flight-like engines undergoing testing. This presentation will summarize the technical progress made on the LauncherOne platform in the past year, and discuss the roadmap ahead.