

Mission Overview

Applicant: Firefly Aerospace

STA File Number: 0901-EX-ST-2020

STA Confirmation Number: EL590739

FRN Number: 0028054328

The main purpose of the launch vehicle is to provide commercial space launch services. The launch vehicle will launch from Vandenberg AFB. It will have a 2215MHz Downlink for telemetry and a 2211MHz Downlink for ranging/location information. There will be no Uplink. The “flight termination” function is the ground-commanded initiation of the on-board ordnance, with the purpose of ending powered flight. This Flight Termination System (FTS) function is only used while in sight of the launch base and will no longer be available or used after the end of the first second stage burn, about 10 minutes into flight. Its sole purpose is as a safety measure to immediately terminate the launch if there is any critical deviation from the launch trajectory, but only if necessary. After launch and stage separation, the second stage will reach the mission altitude of 300km with an inclination of 137 degrees, where it will deploy commercial payloads. The second stage will complete less than 2 orbits while it downlinks data to VAFB and KSAT ground station locations in Hawaii, Mauritius, and South Africa. The entire mission is expected to last no more than 1.5 hours. Once the mission is complete, the second stage will passivate itself and stop transmitting any RF signals to the ground. Passivation includes venting propellant and gas storage tanks, and draining the flight batteries, such that there is no remaining source of energy onboard the stage. All radios on the stage will automatically turn off at this point as well, not including payload signals which are licensed separately. The passivation and RF control script is programmed into the control system and is autonomous. Therefore, the RF communication link is not able to be controlled or turned off from the ground.