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SPACE EXPLORATION SYMPOSIUM (A3)
Space Exploration Overview (1)

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SPACEFLIGHT CLUSTER MISSIONS – SMALLSAT ACCESS BEYOND LEO

Abstract

Spaceflight, with its global network of launch service providers, will begin purchasing launch vehicles and allotting all performance and capacity to smallsat rideshare customers. Starting with Spaceflight's first Cluster Mission, currently scheduled for Q3 2017, Spaceflight is developing a modular system that will convert and effectively turn a EELV into a multi-customer, multi-mission game changer that will deliver small satellites to destinations outside of LEO.

Using Spaceflight's Q4 2015 SHERPA mission as a guide, Spaceflight will launch up to 5000kg of payload to low Earth orbit, with an option to use remaining launch vehicle performance for a second drop off destination in a highly elliptical orbit. Spaceflight will introduce tiered pricing on this launch, creating an economy, business, and first class pricing structure with an accompanying feature set for each customer class (i.e. schedule control, battery charging, late load, etc.). This business model approach, as well as technical approach for aggregating payloads and performing integration, will enable HEO, GTO, and lunar missions at a price point that is well below past comparable missions.

Spaceflight's paper will discuss the payload configuration for Spaceflight's initial Cluster launch, and the pricing, performance, and features to LEO and HEO. Additionally, this paper will briefly introduce Cluster Missions examples that will enable rideshare opportunities to GTO and Earth Escape.