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The Small Launcher Problem

Adam Baker

Kingston University London, Friars Avenue, Roehampton Vale, London, SW15. 3DW, United Kingdom;
+44 7779 126789
a.baker@kingston.ac.uk

ABSTRACT

The range of users and builders of small (mini, micro and nano) satellites is growing, as advances in consumer electronics offers more utility in a smaller and potentially cheaper package. However small satellites have not yet enabled the hoped for ubiquitous, affordable and truly responsive space missions due to launch segment bottlenecks. Although small satellites have and continue to be launched as passengers on larger vehicles, a reliable responsive and affordable launch service does not exist. Dedicated small launchers are nevertheless of wide interest and the subject of a great deal of research, but a commercial case to support a new entrant into the launch market has not yet been found. This paper will summarise the currently known facts about the small satellite launch market, and the real customer needs. An argument will be made that the commercial business case for dedicated small satellite launch is weak. A combination of market stimulation (plus quantification), coupled with some very focused technology risk reduction at low commercial cost will be needed before the small launcher problem can be resolved, allowing low cost fully integrated space missions to become a reality.

Topics

Increasing demands to reduce spending have led to both new challenges and new opportunities for global space. The challenge is to create dramatically lower cost and more responsive space systems and, of course, the launch systems needed to get them to space quickly and at far lower cost. The benefit of creating these new approaches is new opportunities for both business and government to take advantage of rapidly evolving capabilities, creating new applications for the lower cost, more responsive space systems.

Ways to dramatically reduce space system and launch cost and schedule
What are the methods, processes and technologies we can use to make major reductions in cost?

Abstract Submittal
Please submit abstracts for Rispace 2014 of up to **500 words** in PDF or MS Word to Stuart Eves at papers@rispace.org.