LOW-COST COMMERCIAL OPERATIONS FOR A REUSABLE RE-ENTRY SATELLITE

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ABSTRACT

This paper presents some results of a follow-on study currently being performed at Stanford University in support of the NASA/Ames Reusable Re-entry Satellite (RRS) concept (see 1987 Utah State Conference paper by J. Givens and R. Schaupp). Whereas previous published work in this area focused on design of an RRS vehicle, this paper shall address RRS mission operations considerations from a low-cost commercial perspective.

Specific areas to be discussed include the short-term secondary payload situation, a description of baseline payloads chosen, mission configurations examined, ground tracking network solutions, recovery sites, and cost comparisons between missions. In addition, a brief history of relevant military re-entry capsules will be given, as well as an examination of low cost ablators and composite structures. Finally, a discussion of those technology areas to be developed will be held.

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