Rascal Request For Proposal

Saint Louis University

Rascal



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Copper Operational

Test Plan

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# Introduction

The Rascal mission consists of a 6U CubeSat-Class satellite that is to operate at any altitude above 300 km and inclination above 40⁰. Before describing the mission in further detail, it is important to establish the meanings of various terms that are associated with any given CubeSat mission, since most of such terms are not used outside of the small-satellite industry. Firstly, 1U, or one standard unit, is defined as a cube of a uniform edge length of 10 cm. A CubeSat-Class satellite (aka a “nanosatellite”) is a satellite whose dimensions derive from 1 or more of these standard units, a designation that was created by California Polytechnic University in the early 2000’s for describing the satellites being developed by various universities that met this definition. The reason for creating such satellites is twofold: it greatly reduces the time and monetary investment associated with developing custom satellite shapes and structures, while allowing the development of standard satellite deployers (such as the P-POD) for integration into any rocket configuration, thus allowing greater access to launch opportunities for university missions, such as Rascal. The largest deployer volume currently available is for 6U satellites, thus putting a design constraint on the Rascal structure as a whole.

# Mission Overview

## Minimum Success Criteria

# 4. Team Organization

# 5. Schedule