

NASA Smallsat Technology Advancement and Rapid Test Program R. Vaughan¹, R. De Rosee¹
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In the heart of Silicon Valley, NASA Ames Research Center has been at the forefront of nanosat development and adoption for the past 20 years. Continuing these efforts, a new program has begun focused on advancing smallsat technologies by on-orbit demonstration of new capabilities in sensors, subsystems and components with a rapid deployment cadence. The initial goal is to have at least two experiment platforms launched every year and to increase the cadence from there. We intend to bridge the TRL valley of death and make incremental progress with actual on-orbit demonstration. New technologies that will enable future NASA, commercial and DoD missions and leveraging SBIR efforts will be targeted and prioritized for flight opportunities. The workshop and labs developing these systems will rely on COTS technology as much as possible and have a great degree of freedom with development practices and policies. Success will be determined by the series of experiments over multiple flights, not by the performance of any one experiment. Lessons learned from the TechEdSat program will be used to incorporate student involvement to enhance the creativity and energy of the program while working alongside experienced engineers. In this presentation, we lay out the framework for this program and invite the community to participate in advancing all of our interests.