

The Air Force Research Laboratory (AFRL) is chartered with developing innovative science and technologies to meet the future national security needs of the United States. To this end AFRL is aggressively pursuing the development of Responsive Space enabling technologies. The Space Vehicles Directorate (AFRL/VS) has made Responsive Space one of its six core thrusts. The objective of the Responsive Space thrust is to develop and demonstrate the technologies that will enable spacecraft with the following attributes:

- Operational within six days of call-up
- Low-cost (<\$30M mission costs, including spacecraft, launch and operations)
- Small (Total mass <500 kg)
- Satellite payloads are taskable by theater commanders/forces with direct downlink/ data dissemination into theater assets
- Tasking/data dissemination utilizing existing warfighting equipment & architectures
- Missions tailored for a specific theater
- Rapid, low-cost integration of new technologies and payloads

In order to realize these objectives, AFRL is investing in a robust portfolio of science and technology. These technologies feed into a series of operational experiments with groundbased and space-based test beds. The portfolio direction and progress is continuously assessed and analyzed with extensive modeling and simulation analysis. Through these focused efforts AFRL is making great progress in achieving this transformational vision. The coming years will bring many more exciting advances.