PE NUMBER: 0603500F
PE TITLE: MULTI-DISCIPLINARY ADV DEV SPACE TEC

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 03 Advanced Technology Development (ATD)

PE NUMBER AND TITLE: 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	47.676	55.732	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5031	Advanced Optics & Laser Space Tech	15.459	22.644	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5033	Rocket Propulsion Demonstration	25.058	25.972	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5034	Advanced Space Sensors	7.159	7.116	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

Note: Funds for the FY 2006 Congressionally-directed Aerospace Relay Mirror System in the amount of $2.1 million are in the process of being moved to PE 0603605F, High Energy Laser Technology, Project 3647, from this PE for execution. In FY 2007, Project 5031, efforts transfer to PE 0603605F, Project 6311SP, Advanced Optics and Laser Space Technology; Project 5032, efforts transfer to PE 0603112F, Advanced Materials for Weapons Systems, Project 6377SP, Advanced Space Materials; Project 5033, efforts transfer to PE 0603216F, Aerospace Propulsion and Power Technology, Project 6310SP, Space Rocket Propulsion Demonstration; Project 5034, efforts transfer to PE 0602203F, Advanced Aerospace Sensors, Project 6388SP, Advanced Space Sensors; and Project 5062, efforts transfer to PE 0603211F, Aerospace Technology Development/Demonstration, Project 6399SP Advanced Structures Space Vehicles, in order to more effectively manage and provide oversight of the efforts.

(U) A. Mission Description and Budget Item Justification

This program develops and demonstrates multi-disciplinary space technologies focusing on separate technology areas including: 1) advanced optics and laser space technology demonstrates and assesses space unique advanced optics and high energy laser weapon systems capabilities; 2) advanced space materials develop and demonstrate materials and processing technologies for future space vehicle components and protection of space sensors from a variety of laser threats; 3) rocket propulsion develops and demonstrates innovative rocket propulsion technologies, propellants, and manufacturing techniques for launch and spacecraft applications; 4) advanced space sensors develops and demonstrates sensor technologies for intelligence, surveillance, and reconnaissance, communications, targeting, and electronic counter-countermeasures for spacecraft applications; and 5) advanced structures for space vehicles develop space unique requirements for a horizontally launched transatmospheric vehicle operating in an extreme environment. Note: In FY 2006, Congress added $2.1 million for Aerospace Relay Mirror System and $1.0 million for Upper Stage Engine Technology (USET). This program is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies for existing space system upgrades and/or new space system developments that have military utility and address warfighter needs.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC

(U) B. Program Change Summary ($ in Millions)

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	56.908	53.437	68.586
(U)	Current PBR/President's Budget	47.676	55.732	0.000
(U)	Total Adjustments	-9.232	2.295	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.044	-0.805	
	Congressional Increases		3.100	
	Reprogrammings	-7.830		
	SBIR/STTR Transfer	-1.358		

(U) Significant Program Changes:

Efforts transfer to other programs in FY07 and out to more effectively manage and provide oversight of the efforts. Other changes to this PE since the Previous President's Budget are due to higher Air Force priorities.

C. Performance Metrics

(U) Under Development.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE: 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE: 5031 Advanced Optics & Laser Space Tech

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5031 Advanced Optics & Laser Space Tech	15.459	22.644	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

Note: Funds for the FY 2006 Congressionally-directed Aerospace Relay Mirror System in the amount of $2.1 million are in the process of being moved to PE 0603605F, High Energy Laser Technology, Project 3647, from this PE for execution. In FY 2007, efforts transfer to PE 0603605F, Advanced Weapons Technology, Project 6311SP, Advanced Optics and Laser Space Technology, in order to more effectively manage and provide oversight of the efforts.

(U) A. Mission Description and Budget Item Justification

This project provides for the demonstration and detailed assessment of space unique technologies needed for advanced optical systems and high-energy laser weapons.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) MAJOR THRUST: Develop advanced, long-range, optical technologies such as advanced beam control; beam acquisition, tracking, and pointing; adaptive optics; dual line-of-sight pointing; large, lightweight optics; and optical coatings that support relay mirror systems. Relay mirror systems can greatly extend the range of high-power laser weapons, as well as low-power imaging systems. .	2.962	3.016	0.000
(U) In FY 2005: Demonstrated dual line-of-sight tracking technology by tracking a satellite with a relay mirror. Completed the construction of and test the optical quality of a two kilogram per square meter ultra-lightweight mirror.			
(U) In FY 2006: Plan a demonstration to actively track a cruise missile by relaying both the illuminator and the scoring beam through the relay and differentially pointing them at the output. Demonstrate the ability to apply advanced high energy laser (HEL) optical coatings on a three-meter diameter substrate such as lightweight SiC primary mirrors. Design and build a lightweight mirror/micro electro-mechanical system integration test bed for the evaluation of advanced optical components.			
(U) In FY 2007: Not Applicable.			
(U)			
(U) MAJOR THRUST: Perform atmospheric compensation/beam control experiments for applications including antisatellite weapons, relay mirror systems, satellite tests and diagnostics, and high-resolution satellite imaging.	3.726	4.857	0.000
(U) In FY 2005: Completed integration and begin testing of sodium-beacon adaptive optics system including compensated infrared imaging of low earth orbit (LEO) satellites.			
(U) In FY 2006: Begin testing of advanced laser-beacon adaptive optics system on Starfire Optical Range (SOR) 3.5 meter telescope to increase imaging resolution/laser beam control. Perform high-resolution satellite imaging at short wavelengths. Demonstrate and characterize performance of point-ahead compensated laser propagation to LEO satellites using sodium-beacon adaptive optics.			

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE 5031 Advanced Optics & Laser Space Tech

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	MAJOR THRUST: Develop and demonstrate advanced optical beam control technologies for laser propagation through severe and/or extended atmospheric turbulence.	8.771	12.701	0.000
(U)	In FY 2005: Commenced fabrication of ground test equipment for field characterization of laser propagation through atmospheric turbulence. Developed initial advanced adaptive optical and tracking technologies for reliable operation in stressing atmospheric conditions.			
(U)	In FY 2006: Complete integration of first phase ground test system for characterization of laser propagation through atmospheric turbulence. Complete laboratory experiments and begin field testing of advanced adaptive optical and tracking technologies in stressing atmospheric conditions.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Aerospace Relay Mirror System.	0.000	2.070	0.000
(U)	In FY 2005: Not Applicable.			
(U)	In FY 2006: Demonstrate an integrated, multi-mission capability of high-energy laser and relay system.			
(U)	In FY 2007: Not Applicable.			
(U)	Total Cost	15.459	22.644	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) PE 0602605F, Directed Energy Technology.									
(U) PE 0603444F, Maui Space Surveillance System.									
(U) PE 0603605F, Advanced Weapons Technology.									
(U) PE 0603883C, Ballistic Missile Defense Boost Phase Segment.									
(U) This project has been coordinated through the Reliance process to harmonize efforts and									

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE 5031 Advanced Optics & Laser Space Tech

(U) C. Other Program Funding Summary ($ in Millions)

eliminate duplication.

(U) D. Acquisition Strategy

Not Applicable.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE: 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE: 5033 Rocket Propulsion Demonstration

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5033 Rocket Propulsion Demonstration	25.058	25.972	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

Note: In FY 2007, efforts transfer to PE 0603216F, Aerospace Propulsion and Power Technology, Project 6310SP, Space Rocket Propulsion Demonstration, in order to more effectively manage and provide oversight of the efforts.

(U) A. Mission Description and Budget Item Justification

This project develops and demonstrates advanced and innovative low-cost rocket turbomachinery and components, low-cost space launch propulsion system technologies, and advanced propellants for launch and orbit transfer propulsion. Additionally, this project develops technologies for the Technology for Sustainment of Strategic Systems Phase 1. Characteristics such as environmental acceptability, affordability, reliability, responsiveness, reduced weight, and reduced operation and launch costs are emphasized. Increased life and performance of propulsion systems are key goals. This project also develops chemical, electrical, and solar rocket propulsion system technologies for stationkeeping and on-orbit maneuvering applications. Technology areas investigated include ground demonstrations of compact, lightweight, advanced propulsion systems, higher efficiency energy conversion systems (derived from an improved understanding of combustion fundamentals), and high-energy propellants. Technological advances developed in this program could improve the performance of expendable systems' payload capabilities by ~20 percent, and reduce launch, operations, and support costs by ~30 percent. Responsiveness and operability of propulsion systems will be enhanced for reusable launch systems. Technology advances could also lead to seven-year increase in satellite on-orbit time, a 50 percent increase in satellite maneuvering capability, a 25 percent reduction in orbit transfer operational costs, and a 15 percent increase in satellite payload. The efforts in this project contribute to the Integrated High Payoff Rocket Propulsion Technology program, a joint Department of Defense, National Aeronautics and Space Administration, and industry effort to focus rocket propulsion technology on national space launch needs.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) MAJOR THRUST: Develop liquid rocket propulsion technology for current and future space launch vehicles.	12.482	13.892	0.000
(U) In FY 2005: Completed half of the number of tests in the Integrated Powerhead Demonstration test series. Scaled-up advanced lightweight thrust chamber and nozzle technologies. Completed initial scale-up of advanced cryogenic upper stage technologies including higher efficiency energy conversion systems.			
(U) In FY 2006: Continue scale-up and begin testing of advanced lightweight thrust chamber and nozzle technologies. Continue scale-up of advanced cryogenic upper stage technologies including higher efficiency energy conversion systems.			
(U) In FY 2007: Not Applicable.			
(U)			
(U) MAJOR THRUST: Develop solar electric propulsion technologies for existing and future satellites, upper stages, orbit transfer vehicles, and satellite formation flying, station keeping, and repositioning.	2.010	3.738	0.000
(U) In FY 2005: Completed initial development of electric propulsion systems for orbit-transfer by developing			

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE 5033 Rocket Propulsion Demonstration

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
	high-power Hall thrusters capable of LEO to geosynchronous earth orbit (GEO) transfer. Completed component fabrication for integration of a high-power Hall thruster demonstration. Completed delivery of the advanced small satellite propulsion demonstration unit for a microsatellite demonstration.			
(U)	In FY 2006: Continue development of electric propulsion systems for orbit-transfer by developing high-power Hall thrusters capable of LEO to GEO transfer. Continue component development for the high-power Hall thruster demonstration. Support test flight of the advanced small satellite propulsion demonstration unit for a microsatellite demonstration.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	MAJOR THRUST: Develop missile propulsion, aging, and surveillance technology for intercontinental ballistic missiles to include demonstration of missile propulsion technology and Post Boost Control Systems (PBCS). Note: Efforts complete in FY 2006.	3.861	6.521	0.000
(U)	In FY 2005: Completed fabrication of components for the PBCS demonstration and conducted test. Completed fabrication and initiated integration and test for the interim strategic sustainment demonstration motors. Commenced assessment and fabrication of the final strategic sustainment demonstration motors.			
(U)	In FY 2006: Complete fabrication of final components for the final strategic sustainment demonstration motors and prepare for test. Complete assessment and fabrication of the final strategic sustainment demonstration motors.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	MAJOR THRUST: Develop electric and advanced chemical based monopropellant propulsion technologies for future satellite propulsion systems. Phases are referring to IHPRPT program phases.	0.614	0.835	0.000
(U)	In FY 2005: Completed demonstration of pulsed plasma thruster. Furthered the development of advanced Phase II monopropellant and vehicle propulsion ground demonstration.			
(U)	In FY 2006: Complete advanced monopropellant thruster demonstration.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Streaker - Small Launch Vehicle.	2.901	0.000	0.000
(U)	In FY 2005: Developed core boosters and payload interfaces for possible use in the small launch vehicle to be used for rapid and affordable deployment of small satellite payloads.			
(U)	In FY 2006: Not Applicable.			
(U)	In FY 2007: Not Applicable.			
(U)				

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE 5033 Rocket Propulsion Demonstration

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	CONGRESSIONAL ADD: Vortex Cold Wall Low Cost Rocket Engines.	3.190	0.000	0.000
(U)	In FY 2005: Matured technologies for an advanced low-cost, low-weight, high-performance hydrocarbon vortex thrust chamber to integrate and test in flight-type engines.			
(U)	In FY 2006: Not Applicable.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Upper Stage Engine Technology (USET).	0.000	0.986	0.000
(U)	In FY 2005: Congress added $4.0 million for Upper Stage Engine Technology in PE 0602500F, Multi-Disciplinary Space Technology, Project 5026, Rocket Propulsion Component Technology.			
(U)	In FY 2006: Provide additional turbo-pump cavitation modeling, simulation, and tool development for use in future liquid rocket booster and upper stage engine designs and analysis.			
(U)	In FY 2007: Not Applicable.			
(U)	Total Cost	25.058	25.972	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) PE 0602102F, Materials.									
(U) PE 0602203F, Aerospace Propulsion.									
(U) PE 0602601F, Spacecraft Technology.									
(U) PE 0603114N, Power Projection Advanced Technology.									
(U) PE 0603216F, Aerospace Propulsion Power Technology.									
(U) PE 0603401F, Advanced Spacecraft Technology.									
(U) PE 0603853F, Evolved Expendable Launch Vehicle Program.									
(U) This project has been									

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE 5033 Rocket Propulsion Demonstration

(U) C. Other Program Funding Summary ($ in Millions)

coordinated through the Reliance process to harmonize efforts and eliminate duplication.

(U) D. Acquisition Strategy

Not Applicable.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE: 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE: 5034 Advanced Space Sensors

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5034 Advanced Space Sensors	7.159	7.116	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

Note: In FY 2007, efforts transfer to PE 0603203F, Advanced Aerospace Sensors, Project 6388SP, Advanced Space Sensors, in order to more effectively manage and provide oversight of the efforts.

(U) A. Mission Description and Budget Item Justification

This project develops and demonstrates space sensor technologies, including radio frequency sensors; intelligence, surveillance, and reconnaissance sensors (ISR); electro-optical sensors; laser warning sensors; targeting and attack radar sensors; and electronic counter-countermeasures (ECCM) and communications. By developing multi-function radar, laser, electronic combat, and ECCM technologies for space applications, this project provides space platforms with the capability to precisely detect, track, and target air- and ground-based, high-value, time-critical targets, while remaining invulnerable to hostile and natural threats.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) MAJOR THRUST: Develop a material signature analysis capability to evaluate the physical/chemical origins of paint/camouflage thermal reflectance features, and develop a forward predictive capability validated with empirical measurements. Note: Efforts complete in FY 2005	0.193	0.000	0.000
(U) In FY 2005: Completed the development of material signature analysis research into the area of polarimetric signatures. Developed an enhanced system-level modeling capability that incorporates additional signature modalities, including the addition of polarimetric signatures.			
(U) In FY 2006: Not Applicable.			
(U) In FY 2007: Not Applicable.			
(U)			
(U) MAJOR THRUST: Develop and demonstrate technologies to maximize Global Positioning System (GPS) jam resistance, positional accuracy, timing accuracy, and exploitation techniques to improve offensive and defensive combat capabilities.	2.341	2.202	0.000
(U) In FY 2005: Demonstrated assured reference technologies to provide precise time, position, and velocity for on-board and off-board platform applications. Demonstrated antenna wavefront simulation technology to assess anti-jam GPS III techniques.			
(U) In FY 2006: Design space-based distributed position, navigation, and time (PNT) technologies to achieve optimal sensor fusion for a Common Operation Picture (COP). Design multi-ship virtual flight test simulation technology to assess networked clusters of mini" unmanned aerial vehicles.			
(U) In FY 2007: Not Applicable.			
(U)			

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE 5034 Advanced Space Sensors

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	MAJOR THRUST: Develop space laser warning sensor technologies for timely alert to advanced laser acquisition/tracking sensors, including detecting and locating both high power (dazzle/damage) and low power (laser-guided ordnance) signals.	1.101	1.630	0.000
(U)	In FY 2005: Initiated characterization of space-qualified false-alarm sensor modules. Fabricated and integrated space-qualified components for false-alarm sensor space flight engineering test units. Developed mechanical, electrical, and functional interfaces to a host satellite. Planned for on-orbit testing, data collection, and system evaluation. Downselected designs for space-qualified laser warning sensors for rapid detection and characterization of laser designators, trackers, dazzlers, and weapons.			
(U)	In FY 2006: Integrate false alarm package space-flight components onto space flight host. Continue planning and coordinating for on-orbit testing, data collection, and system evaluation. Develop risk-reduction technology for space-qualified laser warning sensors for rapid detection and characterization of laser designators, trackers, dazzlers, and weapons. Complete development of a space-based laser threat scenario testbed for satellite-as-a-sensor technology evaluations.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	MAJOR THRUST: Develop advanced laser communication component and sub-system technology to support a network-level topology for Airborne Intelligence Surveillance and Reconnaissance (AISR).	3.524	2.957	0.000
(U)	In FY 2005: Developed an integrated electro-optical communication terminal for evaluation and testing of AISR links between an airborne communication testbed and ground terminals under simulated space to ground atmospheric conditions. Developed subsystem technologies for a shared radio frequency/electro-optical aperture to service high bandwidth communication needs. Examined applicability of shared apertures to multiple user access capability. Developed aircraft optical network to switch and route high bandwidth laser communication signals to lower level radio frequency systems through a distributed fiber bus providing lower bandwidth link connectivity and redundancy.			
(U)	In FY 2006: Continue development of an integrated electro-optical communication terminal for evaluation and testing of AISR links between an airborne communication testbed and ground terminals. Continue development of shared radio frequency/electro-optical apertures to service high bandwidth communication needs. Test applicability of shared apertures to maintaining air network link connectivity under in weather conditions. Install aircraft optical network to switch and route high bandwidth laser communication signals to lower level radio frequency systems through a distributed fiber bus providing lower bandwidth link connectivity and redundancy. Demonstrate a combined radio frequency/ optical communication air to air to ground high bandwidth network.			
(U)	In FY 2007: Not Applicable.			
(U)				

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603500F MULTI-DISCIPLINARY ADV DEV SPACE TEC	PROJECT NUMBER AND TITLE 5034 Advanced Space Sensors

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2005	FY 2006	FY 2007
(U) MAJOR THRUST: Develop, demonstrate, and evaluate spectral-temporal sensing technologies for detection and identification of transient and moving targets for battlespace surveillance and space situational awareness. Note: In FY 2006, spectral sensing technology efforts from PE 0603203F, Advanced Aerospace Sensors, are extended to the space environment.	0.000	0.327	0.000
(U) In FY 2005: Not Applicable.			
(U) In FY 2006: Design a testbed sensor to evaluate the performance potential of spectral-temporal sensing for battlespace surveillance missions. Model expected performance for a variety of targets, including muzzle flashes, artillery and tank fire, and battlefield explosions			
(U) In FY 2007: Not Applicable.			
(U)			
(U) Total Cost	7.159	7.116	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) PE 0602204F, Aerospace Sensors.									
(U) PE 0603203F, Advanced Aerospace Sensors.									
(U) PE 0603270F, Electronic Combat Technology.									
(U) This project has been coordinated through the Reliance process to harmonize efforts and eliminate duplication.									

(U) D. Acquisition Strategy

Not Applicable.