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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 6: <i>RDT&E Management Support</i>				PE 0605864F: <i>Space Test Program</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	46.524	47.623	47.926	-	47.926	49.569	50.220	50.860	51.768	Continuing	Continuing
662617: <i>Free-Flyer Spacecraft Missions</i>	46.524	47.623	47.926	-	47.926	49.569	50.220	50.860	51.768	Continuing	Continuing

Note

The program funding includes reductions for (Knowledge Based Services)efficiencies that are not intended to impact program content. The efficiencies reductions total \$291k in FY12.

A. Mission Description and Budget Item Justification

(U) The Space Test Program (STP) conducts space test missions for the purpose of accelerating DoD space technology transformation while lowering developmental risk. The program flies an optimally selected number of DoD sponsored experiments consistent with priority, opportunity, and funding. STP missions are the most cost-effective way to flight test new space system technologies, concepts and designs, providing an inexpensive way to:

- Support the space acquisition block development approach
- Demonstrate and develop responsive research and development (R&D) space capabilities
- Provide early operational capabilities to quickly react to new developments
- Perform operational risk reduction through direct flight test of prototype components
- Improve operational design by characterizing the space environment, event, or sensor physics proposed for an operational system/system upgrade
- Develop, test, and acquire advanced payload support hardware for small and medium expendable launch vehicles and manned spaceflight vehicles

(U) The Deputy Secretary of Defense issued a Space Test Program Management & Funding Policy in Jul 2002, reaffirming STP as the primary provider of spaceflight for the entire DoD space research community. The policy states in part that "the STP funding level must be sufficient to provide spaceflight for DoD Space Experiments Review Board (SERB) approved experiments in a timely manner. As a goal, the Air Force funding level should provide for a Small-Launch-Vehicle-Class mission every 2 years and a Medium-Launch-Vehicle-Class mission every 4 years. This is in addition to funding required to support secondary payload and spacecraft missions on other organizations' spacecraft and launch vehicles." The Jul 2002 policy statement also reaffirms STP's role as the single manager for all DoD payloads on the Space Shuttle and the International Space Station. Air Force Space Command issued a policy in May 2004 that establishes STP as the sole gateway for all agencies requesting launch services as a piggyback payload or secondary satellite on a Combatant Command mission. The SERB approved 73 experiments in 2010 as candidates for launch services.

(U) In FY10, STP provided launch services to 7 SERB approved experiments including three long duration experiments on the ISS. In FY11, STP successfully launched the S26 mission which provided launch services to 16 experiments, to include 11 SERB approved experiments. It plans to launch an additional 7 experiments to the ISS and 3 on the Shuttle. It will also provide operations support for free flyer experiments and long duration external experiments on the ISS. In FY12 STP has a continually evolving mission portfolio, whereby space experiments and technology payloads are selected for spaceflight from the most recent list approved by the SERB. STP is authorized to initiate new missions from the prioritized, SERB-approved list. STP may also support non-SERB customers, both DoD and other U.S.

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 6: <i>RDT&E Management Support</i>	R-1 ITEM NOMENCLATURE PE 0605864F: <i>Space Test Program</i>
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Government, on a cost-reimbursable basis. Selection of the most appropriate spaceflight mode for a payload is dependent on optimizing the combination of SERB list priority, timing and readiness of experiments, launch opportunity, and availability of funding. STP support for these payloads includes some or all of the following: mission planning and related support activities; acquisition of a dedicated satellite, launch vehicle, and/or associated integration hardware; integration onto a host satellite, launch vehicle, NASA shuttle, the International Space Station (ISS), ISS resupply, other manned space missions, and commercial launch services, readiness reviews, launch support, and approximately one year of on-orbit operations.

(U) STP supports the National Space Policy by providing unique opportunities for collaboration with NASA, the commercial sector, and international communities.

(U) STP is in Budget Activity 6, RDT&E Management Support, because it supports RDT&E satellite launches.

B. Program Change Summary (\$ in Millions)	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	46.721	47.623	48.377	-	48.377
Current President's Budget	46.524	47.623	47.926	-	47.926
Total Adjustments	-0.197	-	-0.451	-	-0.451
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.197	-	-0.451	-	-0.451

Change Summary Explanation

The program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.291M in FY12. The program funding includes reductions for economic adjustments totaling \$0.016M.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605864F: Space Test Program				PROJECT 662617: Free-Flyer Spacecraft Missions			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
662617: Free-Flyer Spacecraft Missions	46.524	47.623	47.926	-	47.926	49.569	50.220	50.860	51.768	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

(U) The Space Test Program (STP) conducts space test missions for the purpose of accelerating DoD space technology transformation while lowering developmental risk. The program flies an optimally selected number of DoD sponsored experiments consistent with priority, opportunity, and funding. STP missions are the most cost-effective way to flight test new space system technologies, concepts and designs, providing an inexpensive way to:

- Support the space acquisition block development approach
- Demonstrate and develop responsive research and development (R&D) space capabilities
- Provide early operational capabilities to quickly react to new developments
- Perform operational risk reduction through direct flight test of prototype components
- Improve operational design by characterizing the space environment, event, or sensor physics proposed for an operational system/system upgrade
- Develop, test, and acquire advanced payload support hardware for small and medium expendable launch vehicles and manned spaceflight vehicles

(U) The Deputy Secretary of Defense issued a Space Test Program Management & Funding Policy in Jul 2002, reaffirming STP as the primary provider of spaceflight for the entire DoD space research community. The policy states in part that "the STP funding level must be sufficient to provide spaceflight for DoD Space Experiments Review Board (SERB) approved experiments in a timely manner. As a goal, the Air Force funding level should provide for a Small-Launch-Vehicle-Class mission every 2 years and a Medium-Launch-Vehicle-Class mission every 4 years. This is in addition to funding required to support secondary payload and spacecraft missions on other organizations' spacecraft and launch vehicles." The Jul 2002 policy statement also reaffirms STP's role as the single manager for all DoD payloads on the Space Shuttle and the International Space Station. Air Force Space Command issued a policy in May 2004 that establishes STP as the sole gateway for all agencies requesting launch services as a piggyback payload or secondary satellite on a Combatant Command mission. The SERB approved 73 experiments in 2010 as candidates for launch services.

(U) In FY10, STP provided launch services to 7 SERB approved experiments including three long duration experiments on the ISS. In FY11, STP successfully launched the S26 mission which provided launch services to 16 experiments, to include 11 SERB approved experiments. It plans to launch an additional 7 experiments to the ISS and 3 on the Shuttle. It will also provide operations support for free flyer experiments and long duration external experiments on the ISS. In FY12 STP has a continually evolving mission portfolio, whereby space experiments and technology payloads are selected for spaceflight from the most recent list approved by the SERB. STP is authorized to initiate new missions from the prioritized, SERB-approved list. STP may also support non-SERB customers, both DoD and other U.S. Government, on a cost-reimbursable basis. Selection of the most appropriate spaceflight mode for a payload is dependent on optimizing the combination of SERB list priority, timing and readiness of experiments, launch opportunity, and availability of funding. STP support for these payloads includes some or all of the following: mission planning and related support activities; acquisition of a dedicated satellite, launch vehicle, and/or associated integration hardware; integration onto a host

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satellite, launch vehicle, NASA shuttle, the International Space Station (ISS), ISS resupply, other manned space missions, and commercial launch services, readiness reviews, launch support, and approximately one year of on-orbit operations.						
(U) STP supports the National Space Policy by providing unique opportunities for collaboration with NASA, the commercial sector, and international communities.						
(U) STP is in Budget Activity 6, RDT&E Management Support, because it supports RDT&E satellite launches.						
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: PROGRAM SUPPORT Description: Provide program support for piggyback/secondary, Small Launch Vehicle, Medium Launch Vehicle, NASA Shuttle, the ISS, manned and ISS resupply, and commercial spaceflight missions FY 2010 Accomplishments: Provide support for secondary payloads on first ESPA mission FY 2011 Plans: Provide support for secondary payloads on ESPA missions FY 2012 Base Plans: Provide support for secondary payloads on ESPA missions FY 2012 OCO Plans:		1.304	1.470	1.373	-	1.373
Title: PAYLOAD INTEGRATION Description: Initiate, develop, and continue integration of payloads onto piggyback/secondary, Small Launch Vehicle, Medium Launch Vehicle, NASA Shuttle, the ISS, manned and ISS resupply, and commercial spaceflight missions to include acquisition of associated spacecraft and integration hardware. FY 2010 Accomplishments: Fund spacecraft acquisition, integration of secondary payload on operational mission, secondary payload integration on small launch vehicle FY 2011 Plans: Fund spacecraft acquisition, integration of secondary payload on operational mission, secondary payload integration on small launch vehicle FY 2012 Base Plans:		25.484	24.923	12.688	-	12.688

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Fund spacecraft acquisition, integration of secondary payload on operational mission, secondary payload integration on small launch vehicle FY 2012 OCO Plans:						
Title: LAUNCH VEHICLE PROCUREMENT Description: Initiate and continue purchase of launch vehicles and launch vehicle support for piggyback/ secondary, Small Launch Vehicle, Medium Launch Vehicle, NASA Shuttle, the ISS, manned and ISS resupply, and commercial spaceflight missions FY 2010 Accomplishments: Fund spacecraft acquisition, integration of payload as piggyback on spacecraft FY 2011 Plans: Fund initiation of small launch vehicle acquisition FY 2012 Base Plans: Fund initiation of small launch vehicle acquisition FY 2012 OCO Plans:		16.942	14.685	28.169	-	28.169
Title: ON ORBIT SATELLITE OPERATIONS Description: Initiate, develop, and continue first year operations and operations planning for piggyback/ secondary, Small Launch Vehicle, Medium Launch Vehicle, NASA Shuttle, the ISS, manned and ISS resupply, and commercial spacecraft missions FY 2010 Accomplishments: Fund on-orbit operations, ground operations planning and development FY 2011 Plans: Fund on-orbit operations, ground operations planning and development FY 2012 Base Plans: Fund on-orbit operations, ground operations planning and development FY 2012 OCO Plans:		1.294	5.045	4.196	-	4.196
Title: LAUNCH STUDIES		1.500	1.500	1.500	-	1.500

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Conduct studies to explore future launch opportunities, risk reduction activities, and mission planning FY 2010 Accomplishments: Fund studies for future missions FY 2011 Plans: Fund studies for new small launch vehicle mission FY 2012 Base Plans: Fund studies for new small launch vehicle mission FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	46.524	47.623	47.926	-	47.926

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Related Procurement:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy N/A

E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.
