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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3620F: <i>Research, Development, Test & Evaluation, Space Force I BA 6:</i> <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 1206864SF / <i>Space Test Program (STP)</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	25.666	20.881	25.366	0.000	25.366	30.256	30.267	29.827	30.408	Continuing	Continuing
662617: <i>C6601Z</i>	-	25.666	20.881	25.366	0.000	25.366	30.256	30.267	29.827	30.408	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Space Test Program (STP) executes the annual DoD Space Experiments Review Board (SERB) process and consolidates requirements from Science and Technology (S&T) community in order to optimize space system missions and achieve maximum benefit of available resources. STP designs and executes missions to maximize launch mass to orbit, combines multiple flight experiments on suitable spacecraft, multiple spacecraft on available launch vehicles, and facilitates launch packages for government, commercial, and international partnerships. STP provides a cost-effective way to evaluate militarily relevant space flight experiments that:

- Demonstrate on orbit performance of new technologies to increase technology readiness level and validate research hypotheses for the S&T community
- Develop and mature future operational capabilities
- Advance operational tactics, techniques and procedures for future space and test capabilities
- Enable on-orbit experiments to support S&T
- Leverage national (e.g. DoD, commercial, and NASA) and international launch opportunities to increase space access for S&T efforts.

STP supports the Space Force efforts to define future system architectures that address emerging threats, enable resilient space capabilities, and employ tactical space operations to ensure freedom of operations in the space domain.

STP adheres to Executive Orders 10521 and 13185, and the requirement from the Office of the Under Secretary of Defense Research and Engineering (OUSD R&E) to support research per DoD Instruction 3210.1, Administration and Support of Basic Research. In addition, the Deputy Secretary of Defense Space Test Program Management & Funding Policy, issued in July 2002, reaffirmed STP as the primary provider of spaceflight for the DoD space research community. The July 2002 policy statement also reaffirmed STP's role as the single manager for all DoD payloads on the International Space Station (ISS).

Space acquisition must respond with speed and agility to emerging adversary threats. Space Systems Command (SSC) has transformed the organization and implementation of space acquisition to an enterprise approach, maximizing innovation and resiliency, leveraging international, commercial, and mission partnerships, and managing program/project priorities according to an integrated unclassified/classified enterprise space architecture. Expanding the appropriate acquisition authorities and contract mechanisms to deliver capability sooner, SSC will strategically execute experimentation, prototyping, risk reduction, and other efforts to develop new or repurpose existing capabilities.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver STP weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 1206392SF and 1206398SF.

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This program is in Budget Activity 6, RDT&E Management Support because this budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	26.541	20.881	0.000	0.000	0.000
Current President's Budget	25.666	20.881	25.366	0.000	25.366
Total Adjustments	-0.875	0.000	25.366	0.000	25.366
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.875	0.000			
• Other Adjustments	0.000	0.000	25.366	0.000	25.366

Change Summary Explanation

FY 2021: -0.875M due to SBIR. The FY 2022 President's Budget submittal did not reflect FY 2023 through FY 2026 funding. Therefore, an explanation of the change between the two budget positions for FY2023 cannot be made in a relevant manner.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
Title: Payload Integration	20.729	15.889	19.059
Description: Integrate payloads onto spaceflight missions on the full spectrum of DoD on-orbit R&D (e.g. space vehicle, free-flyer payloads, hosted payloads, etc.). Includes acquisition of associated spacecraft and integration hardware.			
FY 2022 Plans: Complete STP-H7 launch integration and installation on the ISS. Continue payload integration of HE-1, and STP-H9, and begin design for STP-H10. Continue satellite integration and test, technical analysis, and interface verifications for STPSat-7. Initiate studies and planning for STPSat-8 acquisition. Collaborate on technical analysis and payload integration rideshare efforts. Additionally, FY 2022 funding will allow the program to implement system resiliency and situational awareness necessary to operate in the contested space domain. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, prototyping, etc.			
FY 2023 Plans:			

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>Begin STP-5 planning, integration and design activities. Begin design for STPSat-8 acquisition (STEP 2.0 (Space Test Experiment Platform)). Conduct payload integration of STP-H9, STP-H10, STP-S27AD3, STP-S27VPC, STP-S28C, STP-28AR1, STP-Sat7 and Queen's Jubilee. Begin design for future ISS missions. Conduct satellite acquisition and integration of STPSat-7 and its ground systems. Begin STP-H11 integration and design activities. Conduct STP-S29 technical analysis and payload integration rideshare. Initiate STP Small Launch STP-S30 (every 2 yrs) Mission Unique and Integration Costs. Collaborate on technical analysis and other future missions as required. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, experimentation, prototyping, etc.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: FY 2023 increased due to initiating several activities. Program accomplishments transition from payload integration to launch to on-orbit ops. Each year, these requirements expand and contract within the overall budget as a function of the lifecycle of the programs.</p>				
<p>Title: Launch Vehicle and Launch Services</p> <p>Description: Purchase launch services, launch vehicles, and launch vehicle support for the full spectrum of DoD on-orbit R&D (e.g. space vehicle, free-flyer payloads, hosted payloads, etc.), enabling spaceflight worthiness and "Do No Harm" certification for Space Systems Command (SSC) and US Space Force (USSF) HQ.</p> <p>FY 2022 Plans: Continue to support spaceflight worthiness and "Do No Harm" certification for launch readiness. Execute S-28A & B small launch initiatives and initiate the S-29 small launch planning and technical analysis. Plan and complete technical analysis for commercial rideshare launch of DoD SERB experiments and International Space Access Review Board (ISARB) approved experiments not manifested onto S-28 or planned for manifest onto S-29.</p> <p>FY 2023 Plans: Continue to Support spaceflight worthiness and "Do No Harm" Certification. Execute STP-S28C, STP-28AR1, STP-H9, STP-S27AD3, STP-S27VPC and Queen's Jubilee small launch initiatives. Execute STP-5 medium launch initiative. Plan and complete technical analysis for commercial rideshare launch of DoD SERB experiments and International Space Access Review Board (ISARB) approved experiments. Continue STPSat-7 launch integration activities and conduct other launch integration activities as required.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement:</p>		3.933	4.395	5.138

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
FY 2023 increased due to executing several initiatives. Program accomplishments transition from payload integration to launch to on-orbit ops. Each year, these requirements expand and contract within the overall budget as a function of the lifecycle of the programs.				
Title: On Orbit Satellite Operations		1.004	0.597	1.169
Description: Execute first-year operations and operations support for STP-sponsored missions.				
FY 2022 Plans: Begin on-orbit operations for H7 and continue on-going operations for ISS payloads and DoD SERB payloads as requested.				
FY 2023 Plans: Continue on-orbit operations for STP-H7, GARI (Gadolinium Aluminum Gallium Garnet Radiation Instrument), and SPIRRAL (Space Power InfraRed Regulation and Analysis of Lifetime). Continue on-going operations for ISS payloads and DoD SERB payloads as requested. Complete Mission Complete Mission Operations for STP-S28A, STP-S28B, STPSat-6, STP-H7, STP-H8, STP-27AD2 (RECURVE, XVI, and Epic Athena payloads). Prepare on-orbit operations for STP-H9, STP-S28C, STP-28AR1, STP-S27AD3, STP-S27VPC and Queen's Jubilee.				
FY 2022 to FY 2023 Increase/Decrease Statement: FY 2023 increased slightly to support on-orbit missions. Program accomplishments transition from payload integration to launch to on-orbit ops. Each year, these requirements expand and contract within the overall budget as a function of the lifecycle of the programs.				
Accomplishments/Planned Programs Subtotals		25.666	20.881	25.366
D. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
E. Acquisition Strategy				
N/A				