Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force											Date: April 2022	
Appropriation/Budget Activity 3620F: *Research, Development, Test & Evaluation, Space Force I* BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 1206616SF *I Space Advanced Technology Development/Demo*							
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	-	0.000	238.584	103.395	0.000	103.395	104.937	102.793	105.087	107.133	Continuing	Continuing
633834: *Integrated Space Technology Demonstrations*	-	0.000	75.571	48.401	0.000	48.401	57.936	60.755	62.131	63.340	Continuing	Continuing
634868: *Maui Space Surveillance System*	-	0.000	20.162	13.148	0.000	13.148	13.516	13.880	14.192	14.468	Continuing	Continuing
634922: *Space & Missile Rocket Propulsion*	-	0.000	61.445	21.942	0.000	21.942	22.528	23.195	23.685	24.147	Continuing	Continuing
63682J: *Spacecraft Vehicles*	-	0.000	81.406	19.904	0.000	19.904	10.957	4.963	5.079	5.178	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program focuses on four major areas. First, integrated space technology demonstrations, is a series of advanced technology demonstrations designed to address mission needs by applying emerging technologies from the Air Force Research Laboratory, other United States government laboratories, and industry. Second, the program focuses on ground-based optical space situational awareness technology development and demonstration at the Maui Space Surveillance System in Hawaii, as well as the operation and upgrade of the facility. Third, the program develops and demonstrates advanced and innovative low-cost high performance satellite propulsion technologies and components. The last major area, spacecraft vehicles, focuses on developing technologies for next-generation space communications terminals and equipment. Efforts in this program have been coordinated through the Department of Defense Science and Technology Executive Committee process to harmonize efforts and eliminate duplication.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver science & technology capabilities. The use of such program funds would be in addition to civilian pay expenses budgeted in program element 1206601SF.

The Department of the Air Force technologies in this program are both enabling and enduring as we invest in maturing emerging technologies that address established mission gaps, and transformational technologies that address integrated enterprise capabilities intended to reshape the future force across air, space, and cyber warfighting domains. Development of transformational operational capabilities through advanced technology solutions focuses on five strategic capabilities: Global Persistent Awareness; Resilient Information Sharing; Rapid, Effective Decision-Making; Complexity, Unpredictability, and Mass; and Speed and Reach of Disruption and Lethality.

This program is in Budget Activity 3, Advanced Technology Development because this budget activity includes development of subsystems and components and efforts to integrate subsystems and components into system prototypes for field experiments and/or tests in a simulated environment.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force	Date: April 2022
Appropriation/Budget Activity 3620F: *Research, Development, Test & Evaluation, Space Force I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 1206616SF *I Space Advanced Technology Development/Demo*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	0.000	76.653	0.000	0.000	0.000
Current President's Budget	0.000	238.584	103.395	0.000	103.395
Total Adjustments	0.000	161.931	103.395	0.000	103.395
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	162.665			
• Congressional Directed Transfers	0.000	-0.734			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	103.395	0.000	103.395

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: 633834: *Integrated Space Technology Demonstrations*		
Congressional Add: *Congressional Add: Project increase - core manipulator joint*	-	1.665
Congressional Add: *Congressional Add: Program increase - accelerate cislunar flight experiment*	-	37.035
Congressional Add Subtotals for Project: 633834	-	38.700
Project: 634868: *Maui Space Surveillance System*		
Congressional Add: *Congressional Add: Program increase - accelerate cislunar flight experiment*	-	8.000
Congressional Add Subtotals for Project: 634868	-	8.000
Project: 634922: *Space & Missile Rocket Propulsion*		
Congressional Add: *Congressional Add: Program increase - tridyne multi-mode propulsion*	-	7.000
Congressional Add: *Congressional Add: Program increase - accelerate cislunar flight experiment*	-	15.965
Congressional Add: *Congressional Add: Program increase - upper stage engine technology*	-	23.000
Congressional Add Subtotals for Project: 634922	-	45.965
Project: 63682J: *Spacecraft Vehicles*		
Congressional Add: *Congressional Add: Program increase - nuclear propulsion technologies for cislunar flight*	-	70.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force	Date: April 2022
Appropriation/Budget Activity 3620F: *Research, Development, Test & Evaluation, Space Force I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 1206616SF *I Space Advanced Technology Development/Demo*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Congressional Add Subtotals for Project: 63682J	-	70.000
Congressional Add Totals for all Projects	-	162.665

Change Summary Explanation

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 FY 2023 cannot be made in a relevant manner.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force			Date: April 2022
Appropriation/Budget Activity 3620F / 3	R-1 Program Element (Number/Name) PE 1206616SF / *Space Advanced Technology Development/Demo*	Project (Number/Name) 633834 / *Integrated Space Technology Demonstrations*	

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
633834: *Integrated Space Technology Demonstrations*	-	0.000	75.571	48.401	0.000	48.401	57.936	60.755	62.131	63.340	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project is a series of advanced technology demonstrations designed to address mission needs by applying emerging technologies from the Air Force Research Laboratory, other United States government laboratories, and industry. These technologies are integrated into system-level demonstrations that are used to test, evaluate, and validate the technologies in a relevant environment.

This project includes the initiation and development of programs addressing Department of the Air Force (DAF) capability gaps and provides technologies for transformational future force capabilities. Transformational efforts will be identified through a competitive process and be responsive to DAF design priorities. Selected efforts will be designated as transformational, indicating enterprise-level priority.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Integrated Satellite Demonstrations	0.000	28.476	20.824
Description: Develop satellite technologies for integrated, robust, and flexible satellite demonstrations building on previous work and leveraging investments by other organizations. ***FY 2022 Plans:*** Continue to transition formation flying satellites using near autonomous formation control. Complete coordination of manifest timeline for critical space science and technology projects addressing priority US Space Force requirements. Continue to transition hosted secondary satellite system used to quickly fly demonstrations and prototypes. Complete payload maturation and begin fabrication of satellites to operate in Very Low Earth Orbit to examine upper atmosphere ionization processes impacting the propagation of radio frequencies used for warfighter communications and navigation. Initiate the development of satellites for flight beyond the geostationary environment to demonstrate technology required for space domain awareness in cislunar space and the requisite support elements, including communication links, position and timing accuracy, and autonomy, to operate in that orbital regime. ***FY 2023 Plans:*** Continue mission-level military utility analyses of technology and associated architectures and employment concepts across multi-domain mission areas. Continue refining guidelines and checkpoints for concept maturation evaluations in context of emerging space technologies. Continue to evolve processes for applying model-based systems engineering into technology decision-making and flight experiment design. Continue design and build of satellite experiments demonstrating small satellite systems/			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3620F / 3	**R-1 Program Element (Number/Name)** PE 1206616SF / *Space Advanced Technology Development/Demo*	**Project (Number/Name)** 633834 / *Integrated Space Technology Demonstrations*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
sub-systems to prove performance, military utility, and enabling capabilities in autonomy, cyber resiliency and integration of commercial and government space networks for command and control (C2) of a hybrid space architecture. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2023 decreased compared to FY 2022 by $7.652 million. Funding decreased due to realignment of space science and technology demonstrations with emerging USSF technology development and demonstration priorities.			
Title: Transformational Technology Development ***Description:*** Continually funded effort. This funding allocation will initiate new and continue existing Transformational Technology Development efforts. The Transformational Technology Development program will select new projects, in alignment with mission focused areas which include, but are not limited to: Intelligent Planning and Wargaming, Battlespace Awareness, Integrated Base Defense, and Hypersonic Multi-Mission Aircraft. Investments focus on technology development efforts including, but are not limited to technologies to enhance survivability, operability and performance of personnel, sensors, and structures in a threat environment through space technology demonstrations for cislunar space domain awareness and space logistics. This investment is overseen by senior representatives from Air and Space Forces who participate in the submission, initial review, and down-selection of Transformational Technology Development proposed efforts. Final selections will be reviewed by the Air Force Deputy Assistant Secretary for Science, Technology, and Engineering before a final recommendation for Congressional approval is made. ***FY 2022 Plans:*** Fund the follow-on efforts for projects started in FY 2021. Select Transformational Technology Development efforts in FY 2022 that support the National Defense Strategy and Department of the Air Force priorities. ***FY 2023 Plans:*** Continue experimentation to demonstrate logistics and domain awareness in orbits beyond Geosynchronous Earth Orbit. Initiate projects selected from the annual WARTECH process that investigate Department of the Air Force prioritized topics. Continue to perform modeling, simulation, and analyses to establish the future force effect of candidate Transformational Component investments and continue the next cycle of WARTECH process. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2023 increased compared to FY 2022 by $19.182 million. Funding increased to scale investment toward the Department of the Air Force target outlined in the Air Force 2030 Science and Technology (S&T) Strategy.	-	8.395	27.577
Accomplishments/Planned Programs Subtotals	0.000	36.871	48.401

	FY 2021	FY 2022
Congressional Add: Congressional Add: Project increase - core manipulator joint	-	1.665

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3620F / 3	**R-1 Program Element (Number/Name)** PE 1206616SF / *Space Advanced Technology Development/Demo*	**Project (Number/Name)** 633834 / *Integrated Space Technology Demonstrations*

	FY 2021	FY 2022
FY 2022 Plans: Conduct Congressionally directed effort.		
Congressional Add: Congressional Add: Program increase - accelerate cislunar flight experiment ***FY 2022 Plans:*** Conduct Congressionally directed effort.	-	37.035
Congressional Adds Subtotals	-	38.700

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force			Date: April 2022
Appropriation/Budget Activity 3620F / 3	R-1 Program Element (Number/Name) PE 1206616SF / *Space Advanced Technology Development/Demo*	Project (Number/Name) 634868 / *Maui Space Surveillance System*	

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
634868: *Maui Space Surveillance System*	-	0.000	20.162	13.148	0.000	13.148	13.516	13.880	14.192	14.468	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program funds ground-based optical space situational awareness technology development and demonstration at the Maui Space Surveillance System in Hawaii, as well as the operation and upgrade of the facility. Efforts in this program have been coordinated through the Department of Defense Science and Technology Executive Committee process to harmonize efforts and eliminate duplication.

A civilian pay adjustment that should have been applied to this Project was assigned an incorrect Project code that aligned it in Budget Activity (BA) 06 (RDT&E Management Support) resulting in the unintentional creation of Project C6601Z in PE 1206616SF under BA 06. This line item will be transferred back to this project (PE 1206616SF, Project 634868 under BA 03) in the next cycle.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Operate and Upgrade Maui Space Surveillance System	0.000	12.162	13.148
Description: Operate and upgrade the Maui Space Surveillance System to support development, demonstration, and integration of ground-based optical space domain awareness technologies. ***FY 2022 Plans:*** Continue to maintain the Maui Space Surveillance System facility and experimental equipment in a mission-ready state, including needed upgrades and modernization to keep facilities and equipment in good working order to perform efficiently and reliably. Continue to operate Maui Space Surveillance System facility for development and demonstration of ground based optical space domain awareness capabilities in conjunction with customer programs and contribute to the US Space Force Space Domain Awareness mission. Continue to collect observations of satellites as requested by mission partners. Operate the prototype regional wide-area-search of the geosynchronous belt in the Pacific AOR ahead of the fielding of the joint Space Systems Command + Australian Space Surveillance Telescope facility. ***FY 2023 Plans:*** Continue to maintain the Maui Space Surveillance System R&D facilities and experimental equipment in a mission-ready state, including needed upgrades and modernization to keep the R&D facilities and equipment in good working order to perform efficiently and reliably. Continue to operate Maui Space Surveillance System R&D facilities for development and demonstration of ground based space domain awareness capabilities in conjunction with customer programs and contribute to the US Space Force Space Domain Awareness mission. Continue to collect observations of satellites as requested by mission partners. As needed,			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3620F / 3	**R-1 Program Element (Number/Name)** PE 1206616SF / *Space Advanced Technology Development/Demo*	**Project (Number/Name)** 634868 / *Maui Space Surveillance System*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
operate the prototype regional wide-area-search of the geosynchronous belt in the Pacific AOR ahead of the fielding of the joint Space Systems Command + Australian Space Surveillance Telescope facility. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2023 increased compared to FY 2022 by $0.986 million. Justification for this increase is described in the plans above.			
Accomplishments/Planned Programs Subtotals	0.000	12.162	13.148

	FY 2021	FY 2022
Congressional Add: Congressional Add: Program increase - accelerate cislunar flight experiment ***FY 2022 Plans:*** Conduct Congressionally directed effort.	-	8.000
Congressional Adds Subtotals	-	8.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force			Date: April 2022
Appropriation/Budget Activity 3620F / 3	R-1 Program Element (Number/Name) PE 1206616SF / *Space Advanced Technology Development/Demo*	Project (Number/Name) 634922 / *Space & Missile Rocket Propulsion*	

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
634922: *Space & Missile Rocket Propulsion*	-	0.000	61.445	21.942	0.000	21.942	22.528	23.195	23.685	24.147	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops and demonstrates advanced and innovative low-cost rocket turbo-machinery and components, and low-cost space launch propulsion technologies. 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. Technology areas investigated include ground demonstrations of compact, lightweight, advanced propulsion technologies, higher efficiency energy conversion systems (derived from an improved understanding of combustion fundamentals), and high-energy propellants. Technological advances in this project could improve the performance of expendable payload capabilities by approximately twenty to fifty percent and reduce launch, operations, and support costs by approximately thirty percent. Responsiveness and operability of propulsion systems will be enhanced for reusable launch systems. The efforts in this project contribute to the sustainment of the rocket propulsion industry, providing rocket propulsion technology for the entire Department of Defense (DoD) and National Aeronautics and Space Administration (NASA). The efforts in this project are part of the Rocket Propulsion of the 21st Century (RP21) program. The efforts in this project are reviewed by a DoD level steering committee annually for relevance to DoD missions and achievement of technical goals defined by the RP21 program.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Liquid Rocket Propulsion Technologies	0.000	8.828	9.530
Description: Develop liquid rocket propulsion technology for current and future space launch vehicles. ***FY 2022 Plans:*** Continue modular engine feasibility to address scalability, applicability, testability, and life cycle cost for National Security Space applications. Initiate development of disruptive engine concepts/cycles for liquid propellant engines, engine system components, and control for space launch system. ***FY 2023 Plans:*** Continue modular engine feasibility to address scalability, applicability, testability, and life cycle cost for National Security Space applications. Continue development of disruptive engine concepts/cycles for liquid propellant engines, engine system components, and control for space launch system. Initiate evaluation of austere location launch capability with commercial partners and demonstration opportunities. Continue coordination of technology transition opportunities for space access to manage technology insertion and evaluate capabilities for rocket engine hardware and related systems. ***FY 2022 to FY 2023 Increase/Decrease Statement:***			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3620F / 3	**R-1 Program Element (Number/Name)** PE 1206616SF / *Space Advanced Technology Development/Demo*	**Project (Number/Name)** 634922 / *Space & Missile Rocket Propulsion*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2023 increased compared to FY 2022 by $0.702 million. Justification for this increase is described in the plans above.			
Title: On-Orbit Propulsion Technologies	0.000	6.652	12.412
Description: Develop solar electric, electric, and monopropellant propulsion technologies for existing and future satellites, upper stages, orbit transfer vehicles, and satellite maneuvering. ***FY 2022 Plans:*** Continue to develop and transition experimental, modeling and simulation, and theoretical efforts geared towards advanced thruster development with emphasis on understanding thrust scale-up. Complete advancement capabilities to study next generation of hypergolic fuels, including propellant characterization, drop-in testing, and lab-scale thruster demonstration. Continue analysis and development of multi-mode propulsion opportunities to combine high efficiency and high thrust capabilities on a common propellant. Continue thrust scale-up effort for advanced non-toxic for use in monopropellant thrusters and electric propulsion thruster for a multi-mode propulsion capability. Complete electric propulsion thruster effort utilizing advanced non-toxic monopropellant. ***FY 2023 Plans:*** Continue to develop and transition experimental, modeling and simulation, and theoretical efforts geared towards advanced thruster development with emphasis on understanding thrust scale-up. Continue analysis and development of multi-mode propulsion opportunities to combine high efficiency and high thrust capabilities on a common propellant. Continue thrust scale-up effort for advanced non-toxic propellant for use in monopropellant thrusters and electric propulsion thruster for a multi-mode propulsion capability. Initiate flight-weight design and development of multimode propulsion flight system combining capabilities of chemical thrusters and electric propulsion thrusters and utilizing a single common propellant for greater operational potentiality. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2023 increased compared to FY 2022 by $5.760 million. Funding increased due to increased emphasis on flight-weight design and development on multimode propulsion for planned flight opportunity in later years.			
Accomplishments/Planned Programs Subtotals	0.000	15.480	21.942

	FY 2021	FY 2022
Congressional Add: Congressional Add: Program increase - tridyne multi-mode propulsion ***FY 2022 Plans:*** Conduct Congressionally directed effort.	-	7.000
Congressional Add: Congressional Add: Program increase - accelerate cislunar flight experiment	-	15.965

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3620F / 3	**R-1 Program Element (Number/Name)** PE 1206616SF / *Space Advanced Technology Development/Demo*	**Project (Number/Name)** 634922 / *Space & Missile Rocket Propulsion*

	FY 2021	FY 2022
FY 2022 Plans: Conduct Congressionally directed effort.		
Congressional Add: Congressional Add: Program increase - upper stage engine technology ***FY 2022 Plans:*** Conduct Congressionally directed effort.	-	23.000
Congressional Adds Subtotals	-	45.965

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force			Date: April 2022
Appropriation/Budget Activity 3620F / 3	R-1 Program Element (Number/Name) PE 1206616SF / *Space Advanced Technology Development/Demo*	Project (Number/Name) 63682J / *Spacecraft Vehicles*	

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
63682J: *Spacecraft Vehicles*	-	0.000	81.406	19.904	0.000	19.904	10.957	4.963	5.079	5.178	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops and demonstrates technologies critical to addressing documented military satellite communications capability gaps and top-ranked Space Force and/or Space and Missile Systems Center technology needs.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Space Communication Technologies	0.000	11.406	19.904
Description: Develop technologies for next-generation space communications terminals and equipment, along with methods/techniques to enable future space system operational command and control concepts. ***FY 2022 Plans:*** Continue support of W/V-band propagation flight experiment. Continue beacon ground terminal operations, maintenance, and re-deployments. Continue collection and analysis of additional data to statistically characterize atmospheric propagation effects and correlate to meteorological parameters. Continue technology research and development work to address military space communications capability needs. Continue fabrication and space-qualify V-band high power amplifiers. Continue development of W/V-band transponder flight experiment, coupled with cross-links. Continue systems engineering and technology risk-reduction for W/V-band ground terminals. ***FY 2023 Plans:*** Continue support of W/V-band propagation flight experiment. Continue beacon ground terminal operations, maintenance, and redeployments. Continue collection and analysis of additional data to statistically characterize atmospheric propagation effects and correlate to meteorological parameters. Continue technology research and development work to address military space communications capability needs. Complete fabrication and space-qualification of V-band high power amplifiers. Complete development of W/V-band transponder flight experiment, coupled with cross-links. Initiate integration and testing of flight experiment engineering unit in preparation for launch and demonstration. Continue systems engineering and technology risk-reduction for W/V-band ground terminals. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY 2023 increased compared to FY 2022 by $8.498 million. Funding increased due to program requirements to complete technology development and prepare for scheduled launch and demonstration.			
Accomplishments/Planned Programs Subtotals	0.000	11.406	19.904

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3620F / 3	**R-1 Program Element (Number/Name)** PE 1206616SF / *Space Advanced Technology Development/Demo*	**Project (Number/Name)** 63682J / *Spacecraft Vehicles*

	FY 2021	FY 2022
Congressional Add: Congressional Add: Program increase - nuclear propulsion technologies for cislunar flight ***FY 2022 Plans:*** Conduct congressionally directed effort.	-	70.000
Congressional Adds Subtotals	-	70.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A