Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force											Date: March 2023	
Appropriation/Budget Activity 3620F: *Research, Development, Test & Evaluation, Space Force* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 1206857SF / *Space Rapid Capabilities Office*							
COST ($ in Millions)	**Prior Years**	**FY 2022**	**FY 2023**	**FY 2024 Base**	**FY 2024 OCO**	**FY 2024 Total**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**Cost To Complete**	**Total Cost**
Total Program Element	-	63.677	54.077	12.036	0.000	12.036	11.340	9.777	9.978	10.338	Continuing	Continuing
64A020: *AF Funded ORSSats*	-	63.677	54.077	12.036	0.000	12.036	11.340	9.777	9.978	10.338	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Space Rapid Capabilities Office (Space RCO) mission is to expedite the development and fielding of operationally focused capabilities for immediate and near term needs as directed by the Space RCO Board of Directors (BoD). Key operating principles include a short and narrow chain of command, overarching programmatic insight, early and prominent war fighter involvement, and small integrated teams within a single office to rapidly augment existing space capabilities when needed, to expand operational capability, reconstitute/replenish/protect critical space capabilities to reserve "continuity of operations" capability, and exploit space technological or operational innovations to increase U.S. advantage.

The Space RCO is ready to develop, test, train, and equip war fighter needs as they are identified at any time. First, the requirements must be validated by the commander U.S. Space Command; second, the project must be approved by the Space RCO BoD; third, the project will be executed by the Space RCO. If the effort is initiated during execution year, it will be described in the next year's budget exhibit.

Space RCO is supporting the Air Force Research Lab (AFRL) developed Space Solar Power project to collect solar energy and provide uninterrupted, assured, and logistically agile power to expeditionary forces operating in unimproved areas such as forward operating bases. AFRL formulated the Space Solar Power Incremental Demonstrations and Research (SSPIDR) project to rapidly demonstrate this innovative technology via a series of integrated demos and technology development/ maturation efforts.

In addition, Space RCO will conduct studies and analyses for future programs to support the BoD.

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

This effort is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

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B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	73.193	45.427	11.982	0.000	11.982
Current President's Budget	63.677	54.077	12.036	0.000	12.036
Total Adjustments	-9.516	8.650	0.054	0.000	0.054
• Congressional General Reductions	0.000	-0.350			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	9.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-9.516	0.000	0.054	0.000	0.054

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2022	FY 2023
Project: 64A020: *AF Funded ORSSats*		
Congressional Add: *Space RCO Digital Beamformed Ground-based SATCOM*	7.000	-
Congressional Add: *Hyper Converged Edge Computing*	-	9.000
Congressional Add Subtotals for Project: 64A020	7.000	9.000
Congressional Add Totals for all Projects	7.000	9.000

Change Summary Explanation

FY 2022: -$9.516M for higher priority USSF needs.
FY 2023: +$9.0M for hyper converged edge computing.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Space RCO Board of Directors (BoD) Projects, Studies, and Analysis	8.826	8.872	9.365	0.000	9.365
Description: Execute projects, studies, and analyses under rapid acquisition authorities inherent to the Space RCO, that address emergent capabilities and respond to validated requirements and other BoD approved efforts to meet needs in year of execution. In addition, provide systems engineering, program management support and civilian pay across all the Space RCO activities as well as perform modeling, simulation, analyses, and assess alternative concepts and requirements.					

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
FY 2023 Plans: Continue to initiate rapid acquisition projects, studies, and analyses that address emergent capabilities requirements and other Space RCO BoD approved efforts. Continue ongoing systems engineering support of future mission development. Additionally, FY 2023 funding will allow the program to rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities include, but are not limited to, program office support, studies, technical analyses, experimentation, prototyping, etc. ***FY 2024 Base Plans:*** Continue to initiate rapid acquisition projects, studies, and analyses that address emergent capabilities requirements and other Space RCO BoD approved efforts. Continue ongoing systems engineering support of future mission development. Additionally, FY 2024 funding will allow the program to rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities include, but are not limited to, program office support, studies, technical analyses, experimentation, prototyping, etc. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024 increased due to inflation adjustment.					
Title: Space RCO Solar Power ***Description:*** Space RCO is developing the Solar Power project to collect solar energy and provide uninterrupted, assured, and logistically agile power to expeditionary forces operating in unimproved areas such as forward operating bases. ***FY 2023 Plans:*** Continue developing space-based solar power collection and transmission technology via a series of integrated demos and technology development/maturation efforts: 1) continue space flight demonstration of solar-to-RF panel payload (take delivery of solar-to-RF payload emulator, validate payload for delivery, continue pre-integration of payload-to-bus), 2) deliver thermal integrated demonstration for on-orbit demonstration, 3) initiate structural operational prototype based on results from scaled array payload demonstrations and validated models, 4) update operational prototype concept designs/analysis based on tile, rectenna, thermal and structure	47.851	36.205	2.671	-	2.671

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
demonstrations and updated models, and 5) continue functional demonstrations for critical technologies in energy generation, deployable structures, thermal technology, RF transmission, and distributed control. ***FY 2024 Base Plans:*** Continue developing space-based solar power collection and transmission technology via a series of integrated demos and technology development/maturation efforts: 1) continue space flight demonstration of solar-to-RF panel payload (take delivery of solar-to-RF payload emulator, validate payload for delivery, continue pre-integration of payload-to-bus), 2) deliver thermal integrated demonstration for on-orbit demonstration, 3) initiate structural operational prototype based on results from scaled array payload demonstrations and validated models, 4) update operational prototype concept designs/analysis based on tile, rectenna, thermal and structure demonstrations and updated models, and 5) continue functional demonstrations for critical technologies in energy generation, deployable structures, thermal technology, RF transmission, and distributed control. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024 decreased due to funding (with the exception of transition funding in FY24 and FY25) being continued in AFRL PE 1206458SF.					
Accomplishments/Planned Programs Subtotals	56.677	45.077	12.036	0.000	12.036

	FY 2022	FY 2023
Congressional Add: Space RCO Digital Beamformed Ground-based SATCOM ***FY 2022 Accomplishments:*** To provide a proof of concept for the Air Force Satellite Control Network with a high-reliability, interoperable production prototype of a Digital Beamformed Ground-based SATCOM system.	7.000	-
Congressional Add: Hyper Converged Edge Computing ***FY 2023 Plans:*** The Air Force Research Lab will execute the Hyper Converged Edge Computing project as a technology development effort with emphasis on accelerating artificial intelligence and machine learning applications in space.	-	9.000
Congressional Adds Subtotals	7.000	9.000

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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E. Acquisition Strategy

Expeditiously award contracts through Space RCO or partner organizations.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1206857SF / *Space Rapid Capabilities Office*	**Project (Number/Name)** 64A020 / *AF Funded ORSSats*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Space RCO Board of Directors (BoD) Projects, Studies, and Analysis	Various	Various : Various	-	8.826	Mar 2022	4.309	Mar 2023	4.687	Dec 2023	-		4.687	Continuing	Continuing	-
Space RCO Solar Power	SS/CPFF	Northrop Grumman : Linthicum, MD	-	43.401	Nov 2021	36.205	Nov 2022	2.671	Nov 2023	-		2.671	Continuing	Continuing	-
Digital Beamformed Ground-based SATCOM	C/CPAF	BlueHalo : Albuquerque, NM	-	7.000	May 2022	-		-		-		-	Continuing	Continuing	-
Hyper Converged Edge Computing	C/TBD	TBD : TBD	-	-		9.000	Sep 2023	-		-		-	Continuing	Continuing	-
		Subtotal	-	59.227		49.514		7.358		-		7.358	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC	RO	Aerospace/Sandia : Various	-	3.750	Dec 2021	3.863	Dec 2022	3.978	Dec 2023	-		3.978	Continuing	Continuing	-
A&AS	Various	Various : Various	-	0.700	Dec 2021	0.700	Dec 2022	0.700	Dec 2023	-		0.700	Continuing	Continuing	-
		Subtotal	-	4.450		4.563		4.678		-		4.678	Continuing	Continuing	N/A

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	63.677		54.077		12.036		-		12.036	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1206857SF / *Space Rapid Capabilities Office*	**Project (Number/Name)** 64A020 / *AF Funded ORSSats*

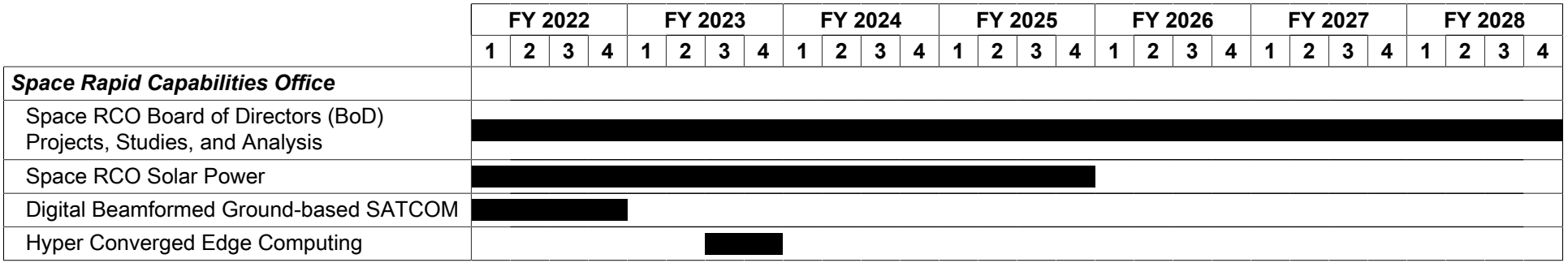

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1206857SF / *Space Rapid Capabilities Office*	**Project (Number/Name)** 64A020 / *AF Funded ORSSats*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Space Rapid Capabilities Office				
Space RCO Board of Directors (BoD) Projects, Studies, and Analysis	1	2022	4	2028
Space RCO Solar Power	1	2022	4	2025
Digital Beamformed Ground-based SATCOM	1	2022	4	2022
Hyper Converged Edge Computing	3	2023	4	2023