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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force	Date: February 2018
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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203614F / <i>JSpOC Mission System</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	80.669	76.467	99.455	72.256	0.000	72.256	102.762	93.870	128.070	125.986	Continuing	Continuing
67A030: <i>Infrastructure</i>	30.018	26.619	28.030	11.914	0.000	11.914	0.000	0.000	0.000	0.000	0.000	96.581
67A031: <i>Mission Applications</i>	38.270	19.821	15.595	11.717	0.000	11.717	0.001	0.000	0.001	0.000	0.000	85.405
67A035: <i>Enterprise Space BMC2</i>	12.381	30.027	55.830	48.625	0.000	48.625	102.761	93.870	128.069	125.986	Continuing	Continuing

Program MDAP/MAIS Code: N82

A. Mission Description and Budget Item Justification

The Joint Space Operations Center (JSpOC) Mission System (JMS) Program is a Space Command and Control (C2) capability for the Commander, Joint Functional Component Commander for Space (JFCC SPACE). The JMS program is predominately a software effort that will produce an integrated, net-centric Service Oriented Architecture (SOA) and the necessary software applications to accomplish required missions. The program will provide a collaborative environment that will enhance and modernize space situational awareness (SSA) capabilities; create decision-relevant views of the space environment; rapidly detect, track and characterize objects of interest; identify / exploit traditional and non-traditional sources; perform space threat analysis; and enable efficient distribution of data across the Space Surveillance Network (SSN). Furthermore, it provides a viable migration path from the legacy Space Defense Operations Center (SPADOC) system, which has 75% of its components beyond end of life or end of service, and the majority of its software is no longer vendor-supported. Enterprise Space BMC2 (previously JMS Increment 3) will provide a Battle Management Command & Control (BMC2) system which will allow the Commander, JFCC-Space to command and control space forces in the space control and space situational awareness realms. This system will develop and integrate battle management mission applications, create an interactive modeling and simulation environment to support training and exercises, provide for secure data sharing and workflow, and Course of Action (COA) development. Funding includes technical studies, development, experimentation, integration and related support costs.

The current and future space domain demands that space systems be responsive to new and changing threats, and can rapidly integrate new capabilities to make our warfighting force more resilient in a contested battlespace. This agility, survivability, and rapid reconstitution must extend through the entire space warfighting enterprise, to include how we learn about the threat; develop solutions; acquire, test, deploy, train, operate and integrate new systems into the greater system of systems; and ensure our space mission force is ready to defeat a thinking adversary in a complex, multi-domain battlespace. The enterprise will use all of its elements to accelerate decision-making, prototype potential solutions, rapidly integrate decision-making tools and sustain a war-winning capability by delivering multi-domain effects in, from, and through space and cyberspace enabling battle management and resilience options to "fight through."

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

The FY2019 funding request was reduced by \$29.800 million to account for the availability of prior year execution balances.

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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203614F / <i>JSpOC Mission System</i>
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This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	87.889	99.455	93.206	0.000	93.206
Current President's Budget	76.467	99.455	72.256	0.000	72.256
Total Adjustments	-11.422	0.000	-20.950	0.000	-20.950
• 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	-0.500	0.000			
• SBIR/STTR Transfer	-2.622	0.000			
• Other Adjustments	-8.300	0.000	-20.950	0.000	-20.950

Change Summary Explanation

FY2017: \$8.300 decrease due to request for additional appropriations backout.

FY2019: \$29.800M reduction for under-execution.

FY2019: \$5.000M increase to Fix ESBMC2.

FY2019: \$4.396M increase to ESBMC2 Foundational Architecture.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A030 / Infrastructure			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
67A030: Infrastructure	30.018	26.619	28.030	11.914	0.000	11.914	0.000	0.000	0.000	0.000	0.000	96.581
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Infrastructure provides a Service Oriented Architecture (SOA), net-centric collaborative information environment at the Unclassified, Secret, and Top Secret / Sensitive Compartmented Information (TS/SCI) levels. Efforts incorporate net-centric enterprise services and integrating incremental space mission applications services. Priority is migration off the legacy SPADOC hardware and services into a sustainable infrastructure. Effort integrates components of SSA mission applications and C2 capabilities into the JSpOC to create timely, actionable knowledge necessary for maintaining space superiority and exercising command and control of space forces.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Increment 2	26.619	28.030	11.914	-	11.914
Description: Pursues and integrates a collaborative net-centric, SOA information environment.					
FY 2018 Plans: Execute testing for Service Pack (SP)-11 to include content accelerated from SP-13 and complete Standard Space Trainer. Continue program office support and other related support activities that may include, but are not limited to studies, technical analysis, etc.					
FY 2019 Base Plans: Complete testing for SP-11 and deliver JMS Increment 2. Continue program office support and other activities that may include, but are not limited to studies, technical analysis, etc. 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, prototyping, etc.					
FY 2018 to FY 2019 Increase/Decrease Statement: FY2019 decreased compared to FY2018 by \$16.116M. Justification for this decrease is described in plans above.					
Accomplishments/Planned Programs Subtotals	26.619	28.030	11.914	-	11.914

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force									Date: February 2018		
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A030 / Infrastructure			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• SPAF 01 Line Item 836790: Space Mods Space	-	3.850	20.366	-	20.366	12.373	12.588	12.845	13.086	134.274	209.382
Remarks											
Replaces JMS components and provides an operational, sustainable environment to maintain capabilities that fuse data from space intelligence, surveillance, reconnaissance, and environmental sources. This modification will procure commercial hardware, software licenses, and warranties to upgrade the operational environment enclaves (2 Secret / 2 TS/SCI), as well as keep up to date development/operational testing locations.											
D. Acquisition Strategy											
The JMS overarching Acquisition Strategy, approved by the Milestone Decision Authority on 15 April 2012, provides for a multi-increment program to develop, integrate, test, and deliver JMS capability. The acquisition strategy reflects new principles that address the speed, agility, and adaptability required for successful Information Technology (IT) acquisition resulting in a tailored incremental acquisition approach to deliver early and often by leveraging mature industry capabilities and taking advantage of previous Government investments in Federally Funded Research and Development Center (FFRDC) and Government lab prototyping efforts.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A030 / Infrastructure					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JMS SOA, Infrastructure and core service development	Various	Various : Various	6.744	-		-		-		-		-	0.000	6.744	18.782
JMS High-performance computing and security infrastructure development	Various	Various : Various	2.031	-		-		-		-		-	0.000	2.031	2.593
JMS Government Capability Providers	Various	Various : Various	0.000	0.150	Jul 2017	-		-		-		-	0.000	0.150	1.575
JMS Enterprise SEI	Various	Various : Various	0.000	15.470	Nov 2016	26.204	Nov 2017	10.685	Nov 2018	-		10.685	0.000	52.359	45.784
JMS Mission Infrastructure	Various	Various : Various	8.050	6.747	Jun 2017	-		0.200	Nov 2018	-		0.200	0.000	14.997	10.256
JMS Net-Centric Sensors and Data Sources	Various	Various : Various	0.835	-		-		-		-		-	0.000	0.835	0.642
JMS Standard Space Trainer	C/CPFF	Sonalyt : Colorado Springs, CO	2.150	2.175	Dec 2016	-		-		-		-	0.000	4.325	4.425
JMS Integration & Acq Logistics	Various	SPAWAR : San Diego, CA	7.504	-		-		-		-		-	0.000	7.504	13.623
Subtotal			27.314	24.542		26.204		10.885		-		10.885	0.000	88.945	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS	Various	Various : Various	2.014	2.077	Nov 2016	1.826	Nov 2017	1.029	Nov 2018	-		1.029	0.000	6.946	8.744
FFRDC	Various	Various : Various	0.690	-		-		-		-		-	0.000	0.690	0.690
Subtotal			2.704	2.077		1.826		1.029		-		1.029	0.000	7.636	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			30.018	26.619		28.030		11.914		-		11.914	0.000	96.581	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force	Date: February 2018
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A030 / Infrastructure
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
JMS Infrastructure																												
Service Pack 9 Development and Delivery																												
Service Pack 11 Development and Delivery																												
Inc 2 Full Deployment Decision (FDD)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force			Date: February 2018
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A030 / Infrastructure	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
JMS Infrastructure				
Service Pack 9 Development and Delivery	1	2017	2	2018
Service Pack 11 Development and Delivery	1	2017	3	2019
Inc 2 Full Deployment Decision (FDD)	3	2019	3	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A031 / Mission Applications			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
67A031: Mission Applications	38.270	19.821	15.595	11.717	0.000	11.717	0.001	0.000	0.001	0.000	0.000	85.405
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Mission applications provides space services to enhance the accuracy, sustainability, and responsiveness of space surveillance capabilities by providing the knowledge environment necessary to enable the Commander JFCC Space to make rapid, responsive decisions for the protection of space assets from proliferating threats (adversary as well as orbiting debris). The system provides a high accuracy space catalog (knowledge of space objects), increased observation verification and capabilities, and improved event processing. Research, development, and system design provides SSA space catalog applications, services, space surveillance observation processing, and sensor tasking. Funding includes technical studies, development, and integration.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Increment 2	19.821	15.595	11.717	-	11.717
Description: Services/mission applications to conduct space control/situational awareness.					
FY 2018 Plans: Integrate and test commercial software supporting test, training and exercises as well as software management tools. Continue program office support and other related support activities. These activities may include, but are not limited to studies, technical analysis, prototyping, etc					
FY 2019 Base Plans: Finish integration and test of mission application and deliver JMS Increment 2. 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, prototyping, etc.					
FY 2018 to FY 2019 Increase/Decrease Statement: FY2019 decreased compared to FY2018 by \$3.878M. Justification for this decrease is described in plans above.					
Accomplishments/Planned Programs Subtotals	19.821	15.595	11.717	-	11.717

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

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• SPAF 01 Line Item	-	3.850	20.366	-	20.366	12.373	12.588	12.845	13.086	134.274	209.382
836790: Space Mods Space											

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force							Date: February 2018		
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System			Project (Number/Name) 67A031 / Mission Applications		

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

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks											

D. Acquisition Strategy

The JMS overarching Acquisition Strategy, approved by the Milestone Decision Authority on 15 Apr 2012, provides for a multi-increment program to develop, integrate, test, and deliver JMS capability. The acquisition strategy reflects new principles that address the speed, agility, and adaptability required for successful IT acquisition resulting in a tailored incremental acquisition approach to deliver early and often by leveraging mature industry capabilities and taking advantage of previous Government investments in Federally Funded Research and Development Center (FFRDC) and Government lab prototyping efforts.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A031 / Mission Applications					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JMS Mission applications and service pack content development	Various	Various : Various	14.833	-		-		-		-		-	0.000	14.833	5.845
JMS Enterprise SEI	Various	Various : Various	0.000	5.244	Nov 2016	2.489	Jan 2018	1.863	Nov 2018	-		1.863	0.000	9.596	9.235
JMS Technical Mission Analysis (WS)	Various	Various : Various	1.152	1.301	Nov 2016	1.192	Nov 2017	1.000	Jan 2019	-		1.000	0.000	4.645	11.094
JMS COTS hardware, software purchase and engineering support	Various	Various : Various	13.965	6.941	Nov 2016	6.102	Oct 2017	5.188	Nov 2018	-		5.188	0.000	32.196	27.923
Subtotal			29.950	13.486		9.783		8.051		-		8.051	0.000	61.270	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Costs	Various	Various : Various	0.361	0.197	Nov 2016	0.223	Nov 2017	0.411	Nov 2018	-		0.411	0.000	1.192	1.033
Subtotal			0.361	0.197		0.223		0.411		-		0.411	0.000	1.192	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Combined Developmental Test / Operational Test	Various	Various : Various	2.300	2.752	Nov 2016	2.300	Dec 2017	0.800	Dec 2018	-		0.800	0.000	8.152	6.157
Combined Test Facility	Various	Various : Various	1.623	1.204	Nov 2016	0.973	Dec 2017	0.610	Dec 2018	-		0.610	0.000	4.410	4.473
Subtotal			3.923	3.956		3.273		1.410		-		1.410	0.000	12.562	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS	Various	Various : Various	2.912	0.865	Dec 2016	1.184	Nov 2017	0.990	Nov 2018	-		0.990	0.000	5.951	3.338

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A031 / Mission Applications					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC	Various	Various : Various	0.974	1.252	Dec 2016	1.057	Dec 2017	0.800	Dec 2018	-		0.800	0.000	4.083	3.455
Other Support	Various	Various : Various	0.150	0.065	Oct 2016	0.075	Oct 2017	0.055	Oct 2018	-		0.055	0.000	0.345	0.372
Subtotal			4.036	2.182		2.316		1.845		-		1.845	0.000	10.379	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			38.270	19.821		15.595		11.717		-		11.717	0.000	85.403	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force	Date: February 2018
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A031 / Mission Applications
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<i>JMS Mission Applications</i>																												
Service Pack 9 Development and Delivery																												
Service Pack 11 Development and Delivery																												
Increment 2 FDD																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force			Date: February 2018
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A031 / Mission Applications	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
JMS Mission Applications				
Service Pack 9 Development and Delivery	1	2017	2	2018
Service Pack 11 Development and Delivery	1	2017	3	2019
Increment 2 FDD	3	2019	3	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A035 / Enterprise Space BMC2			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
67A035: Enterprise Space BMC2	12.381	30.027	55.830	48.625	0.000	48.625	102.761	93.870	128.069	125.986	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Enterprise Space Battle Management Command & Control (ESBMC2) provides a BMC2 System(s) that allows JFCC Space to meet emerging threats. This system will develop and integrate mission applications which include, but are not limited to, providing the ability to aggregate intelligence data from various user-defined sources and automatically generating alerts, provide an integrated operating picture for radio frequency spectrum inputs, and create an interactive modeling and simulation environment to support training and exercises, collaborative data sharing, and Course of Action (COA) development and assessment. Funding includes technical studies, development, experimentation, systems engineering, integration and related support costs.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Enterprise Space BMC2								30.027	55.830	48.625	0.000	48.625
Description: Services/mission applications and infrastructure to deliver a robust, responsive BMC2 capability to meet emerging threats. Completion of Enterprise Space BMC2 will deliver a system which provides critical margin of excellence for decision makers trying to prevent a conflict from extending to space, or winning it if it does. Services that tie critical Space Situational Awareness (SSA), Indications & Warning (I&W), Transmit/Receive, Space Control, Tactical Operations and Common Platforms and Infrastructure, Cyber and Threat Warning capabilities to BMC2 including dedicated Systems Engineering & Integration (SE&I), Test & Evaluation (T&E), Model Based Systems Engineering (MBSE) and prototype Validation & Verification support for BMC2 activities. Tie ESBMC2 together with its external interfaces to ensure system of systems closure.												
FY 2018 Plans: Continue developmental planning and program support, systems engineering, design, technical maturation and risk reduction, prototyping and integration of Enterprise Space BMC2 commercial, industry and government capabilities. Systems Engineering enterprise management activity will build roadmaps for BMC2 efforts including prototypes built by Space & Missile Systems Center and other organizations. Contract for comprehensive system development and initial integration with government/commercial provider(s). Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, systems engineering, design, capability development, prototype development and integration, experimentation, program integration, support to residual capabilities and software integration.												
FY 2019 Base Plans:												

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force			Date: February 2018			
Appropriation/Budget Activity 3600 / 7		R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System		Project (Number/Name) 67A035 / Enterprise Space BMC2		
B. Accomplishments/Planned Programs (\$ in Millions)						
		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>SMC will continue developmental planning and contracting efforts to include, but not limited to, program support, systems engineering, design, technical maturation and risk reduction, prototyping and integration of Enterprise Space BMC2 commercial, industry and government capabilities including infrastructure. Continue to enhance and modernize prototype capabilities in the National Space Defense Center and the Joint Space Operations Center and other operations centers supporting or supported by space capabilities. End-to-end systems engineering requirements flow down and verification planning for Space Enterprise BMC2. Effort includes critical integration of all activities needed to support the kill chain. 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, systems engineering, design, capability development, prototype development and integration, experimentation, program integration, support to residual capabilities and software integration, etc.</p> <p>FY 2019 OCO Plans: None</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: FY2019 decreased compared to FY 2018 by \$7.205M. Justification for this decrease is described in plans above.</p>						
Accomplishments/Planned Programs Subtotals		30.027	55.830	48.625	0.000	48.625
C. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						
D. Acquisition Strategy The Air Force is in developmental planning for the Enterprise Space BMC2 acquisition strategy. Increments 1 and 2 used a government-as-an-integrator model with the Navy's Space and Naval Warfare Systems Command (SPAWAR) leading those efforts. The program developed and incrementally delivered service packs into operations. The Enterprise Space BMC2 strategy will focus on rapidly delivering capability to warfighters, leveraging commercial, industry and government prototypes, followed by a sustained comprehensive system delivery. The emphasis will be on agile software development.						
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.						

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A035 / Enterprise Space BMC2					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ESBMC2 Tools	Various	Various : Various	0.000	13.054	Jun 2017	18.647	Nov 2017	8.316	Nov 2018	-		8.316	Continuing	Continuing	-
ESBMC2 Government Capability Development	Various	Various : Various	3.204	9.396	Jun 2017	15.053	Nov 2017	9.000	Nov 2018	-		9.000	Continuing	Continuing	-
ESBMC2 Enterprise Systems Engineering & Integration	Various	Various : Various	3.633	3.961	Jun 2017	7.390	Oct 2017	17.484	Dec 2018	-		17.484	Continuing	Continuing	-
ESBMC2 Technical Mission Analysis (WS)	MIPR	Various : Various	-	-		1.668	Oct 2017	1.718	Nov 2018	-		1.718	Continuing	Continuing	-
Subtotal			6.837	26.411		42.758		36.518		-		36.518	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Civilian Reimbursable Budget Authority	TBD	Not specified. : TBD	0.000	0.172	Sep 2017	0.351	Jan 2018	0.358	Jan 2019	-		0.358	Continuing	Continuing	-
Subtotal			0.000	0.172		0.351		0.358		-		0.358	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS	C/FFP	Various : Various	2.494	1.716	Jun 2017	5.942	Nov 2017	5.461	Nov 2018	-		5.461	Continuing	Continuing	-
FFRDC	Various	Various : Various	3.000	1.674	Jun 2017	6.674	Nov 2017	6.184	Nov 2018	-		6.184	Continuing	Continuing	-
Other Support	Various	Various : Various	0.050	0.054	Jun 2017	0.105	Oct 2017	0.104	Oct 2018	-		0.104	Continuing	Continuing	-
Subtotal			5.544	3.444		12.721		11.749		-		11.749	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			12.381	30.027		55.830		48.625		-		48.625	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force							Date: February 2018			
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System		Project (Number/Name) 67A035 / Enterprise Space BMC2				
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks										

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force	Date: February 2018
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A035 / Enterprise Space BMC2
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ESBMC2																												
Tech Exploration, Maturation & Risk Reduction																												
Systems Engineering/Design Effort																												
Prototyping & Experimentation																												
Development/Integration																												
Milestone B																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A035 / Enterprise Space BMC2

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
ESBMC2				
Tech Exploration, Maturation & Risk Reduction	4	2017	4	2020
Systems Engineering/Design Effort	3	2017	2	2021
Prototyping & Experimentation	4	2017	4	2022
Development/Integration	3	2018	4	2022
Milestone B	2	2021	2	2021