

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>
---	--

COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	1,067.753	9.031	29.288	23.945	0.000	23.945	48.309	148.642	108.571	29.964	0.000	1,465.503
65A006: <i>Space Based Space Surveillance</i>	974.562	0.000	28.404	23.945	0.000	23.945	48.309	148.642	108.571	29.964	0.000	1,362.397
65A012: <i>Net-centric Sensors and Data Sources</i>	74.417	6.724	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	81.141
65A026: <i>C-Band Radar</i>	18.774	2.307	0.884	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	21.965

Program MDAP/MAIS Code: 328

A. Mission Description and Budget Item Justification

Space Situational Awareness (SSA) is knowledge of all aspects of space related to operations as described in the approved SSA Initial Capabilities Document (ICD). As the foundation for space control, SSA encompasses intelligence on adversary space operations; surveillance of all space objects and activities; detailed reconnaissance of specific space assets; monitoring space environmental conditions; monitoring cooperative space assets; and conducting integrated command, control, communications, processing, analysis, dissemination, and archiving activities. This Program Element (PE) develops new Air Force sensors, and improved information capabilities for integration across the SSA network; it also includes developmental planning and technology forecasting for future blocks and emerging needs.

A companion program element, 0305940F, Space Situational Awareness Operations, fields, upgrades, operationalizes, operates, and sustains existing sensors and information integration capabilities within the SSA network. An additional companion program element, 0305614F, JSpOC Mission System, processes surveillance of all space objects and activities, maintains detailed reconnaissance of space assets, fuses space data, maintains awareness of cooperative space assets, and allows JFCC-Space to conduct integrated C2 of space forces.

Development activities are necessary to deploy new advanced sensors capable of searching for, tracking, and identifying the expanding number of debris objects on orbit as well as the increasing number of satellites launched by other nations, of which many are smaller and more capable than previous spacecraft. These activities are also required to better integrate the disparate elements of SSA in order to enable rapid and responsive space operations.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force	Date: February 2016
--	----------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>
---	--

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	9.462	32.374	50.598	0.000	50.598
Current President's Budget	9.031	29.288	23.945	0.000	23.945
Total Adjustments	-0.431	-3.086	-26.653	0.000	-26.653
• Congressional General Reductions	0.000	-0.086			
• Congressional Directed Reductions	0.000	-3.000			
• 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	-0.431	0.000			
• Other Adjustments	0.000	0.000	-26.653	0.000	-26.653

Change Summary Explanation

FY2017: -\$26.415M for re-phase of SBSS Follow-on; -\$0.238M inflation adjustment

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>				Project (Number/Name) 65A006 / <i>Space Based Space Surveillance</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
65A006: <i>Space Based Space Surveillance</i>	974.562	0.000	28.404	23.945	0.000	23.945	48.309	148.642	108.571	29.964	0.000	1,362.397
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Space-Based Space Surveillance (SBSS) Block 10 satellite was launched September 2010 and is currently operational. The SBSS Follow-On program will develop and deliver a system, including ground segment, that continues providing space object surveillance from space post SBSS Block 10 End-of-Life. The Follow-On program is based upon the current Space Situational Awareness (SSA) Initial Capabilities Document (ICD) architectural requirements focused on protecting High Value Assets (HVAs) in Geosynchronous Orbit (GEO). It will provide the capability to search, detect, and track objects primarily in deep space GEO from a space-based sensor for timely custody and event detection. Surveillance from space augments existing ground sensors with timely 24-hour, above the weather collection of GEO satellite metric data only possible with a space based sensor and then communicates its findings to the Joint Space Operations Center (JSpOC).

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

	FY 2015	FY 2016	FY 2017
Title: SBSS Follow-On Design & Development	0.000	28.404	23.945
Description: Performs space based SSA analysis, research, and development for the SBSS system.			
FY 2015 Accomplishments: N/A			
FY 2016 Plans: Transition technology from the ORS-5 operational demonstration mission to begin development of payload hardware. Initiate analysis of Space Surveillance Network (SSN) 2025 to evaluate against threat paradigm.			
FY 2017 Plans: Complete source selection, award contract, and start development of SBSS Follow-On with entry into Engineering and Manufacturing Development (EMD). Perform risk reduction activities and analyses for the SBSS Follow-On based on threat paradigm analyzed/out-briefed by the Space Security and Defense Program (SSDP).			
Accomplishments/Planned Programs Subtotals			23.945

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

N/A

Remarks

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A006 / <i>Space Based Space Surveillance</i>

D. Acquisition Strategy

SBSS Block 10 currently operational with End of Life expected in 2020.

Architectural studies have been conducted to determine the best way to provide future space-based space surveillance beyond the life of the current system.

The Acquisition Strategy for SBSS Follow-On is under 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.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A006 / <i>Space Based Space Surveillance Systems</i>
--	--	--

Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Block 10 design and development	C/CPAF	Northrop Grumman : Redondo Beach, CA	549.291	0.000		0.000		0.000		0.000		0.000	0.000	549.291	-
Block 10 Technical risk reduction, mission planning & mission data processing	SS/CPFF	MIT Lincoln Laboratory : Lexington, MA	29.271	0.000		0.000		0.000		0.000		0.000	0.000	29.271	-
Block 10 Launch vehicle integration	MIPR	Space and Missile Systems Center : Kirtland AFB, NM	85.644	0.000		0.000		0.000		0.000		0.000	0.000	85.644	-
Block 10 Contractor Ops & Interim Contract Support	SS/CPAF	Boeing : Huntington Beach, CA	152.223	0.000		0.000		0.000		0.000		0.000	0.000	152.223	-
SBSS Follow-on Design & Development	Various	Various : Various	10.894	0.000		0.000		0.000		0.000		0.000	0.000	10.894	-
SSA risk reduction and technology transfer	Various	Various : Various	33.247	0.000		0.000		0.000		0.000		0.000	0.000	33.247	-
STARE Study and Design work	MIPR	Lawrence Livermore National Laboratory : Livermore, CA	1.576	0.000		0.000		0.000		0.000		0.000	0.000	1.576	-
SBSS Follow On Ground Feasibility Assessment and Implementation	TBD	TBD : TBD	0.000	0.000		0.600	Mar 2016	1.219	Mar 2017	0.000		1.219	Continuing	Continuing	-
SBSS Follow On Prime Development	C/TBD	TBD : TBD	0.000	0.000		0.000		12.038	Mar 2017	0.000		12.038	0.000	12.038	-
Technical Mission Analysis (WS)	Various	Various : Various	0.000	0.000		19.975	Oct 2015	2.764	Oct 2016	0.000		2.764	0.000	22.739	-
Subtotal			862.146	0.000		20.575		16.021		0.000		16.021	-	-	-

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force												Date: February 2016				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
3600 / 5				PE 0604425F / Space Situation Awareness Systems				65A006 / Space Based Space Surveillance Systems								
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	
Program Office Support, FFRDC	SS/CPFF	Aerospace : Los Angeles, CA	44.559	0.000		0.000		0.000		0.000		0.000	0.000	44.559	-	
Engineering and Technical Services	C/FFP	AT&T Government Solutions, Inc : Los Angeles, CA	22.296	0.000		0.000		0.000		0.000		0.000	0.000	22.296	-	
Other Support	Various	Various : Los Angeles, CA	30.867	0.000		0.000		0.000		0.000		0.000	0.000	30.867	-	
Subtotal			97.722	0.000		0.000		0.000		0.000		0.000	0.000	97.722	-	
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	
Subtotal			-	-		-		-		-		-	-	-	-	
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	C/FFP	Aerospace Corp. : Los Angeles, CA	0.000	0.000		2.885	Oct 2015	3.121	Oct 2016	0.000		3.121	0.000	6.006	-	
A&AS	Various	Various : TBD	9.728	0.000		4.870	Oct 2015	4.725	Oct 2016	0.000		4.725	0.000	19.323	-	
Other Support	Various	Various : TBD	4.966	0.000		0.074	Oct 2015	0.078	Oct 2016	0.000		0.078	0.000	5.118	-	
Subtotal			14.694	0.000		7.829		7.924		0.000		7.924	0.000	30.447	-	
Project Cost Totals			974.562	0.000		28.404		23.945		0.000		23.945	-	-	-	
Remarks																

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A006 / <i>Space Based Space Surveillance</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Pre-Phase A Acquisition Planning	1	2015	1	2016
Acq Strategy, RFP Dev and Source Selection	1	2016	2	2017
MDD	2	2016	2	2016
Contract Award	3	2017	3	2017
Tech Dev / Engineering and Manufacturing Development / Production	3	2017	3	2021
CDD	1	2018	1	2018
Preliminary Design Review (PDR)	3	2018	3	2018
Milestone B	4	2018	4	2018
Critical Design Review (CDR)	3	2019	3	2019
Launch	3	2021	3	2021

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force										Date: February 2016		
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>			Project (Number/Name) 65A012 / <i>Net-centric Sensors and Data Sources</i>				
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
65A012: <i>Net-centric Sensors and Data Sources</i>	74.417	6.724	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	81.141
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Note

Project 65A012, Net-centric Sensors and Data Sources (N-CSDS), completed in FY15

A. Mission Description and Budget Item Justification

Net-centric Sensors and Data Sources (N-CSDS) efforts migrate the Space Surveillance Network, non-traditional SSA sensors and data sources for use by any entity (primarily the Joint Space Operations Center (JSpOC)) into a net-centric enterprise, enabling more rapid distribution of data to the warfighter based on an AFSPC provided prioritization list. This effort will define and implement the technical architecture, and support the concept to provide the foundational data necessary to enable rapid, responsive decisions by the Commander, United States Strategic Command's Joint Functional Component Commander for Space (JFCC Space) and other national capability users to detect, evaluate, and attribute space events. This effort builds upon and operationalizes the successful Extended Space Sensor Architecture Advanced Concept Technology Demonstration (ESSA ACTD) and prototypes how disparate and legacy space sensor network data can be translated into a net-centric operating environment. Data will be exposed as defined by published DoD and community interface standards to ensure technical interoperability.

Data exposed from Space Situational Awareness (SSA) sensors and other non-traditional data sources via N-CSDS effort will be integrated into the JMS program (PE 0305614F).

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

	FY 2015	FY 2016	FY 2017
Title: Sensor & Data Integration & Exposure	6.724	0.000	0.000
Description: Providing Data Exposure and Data Source Integration Net-Centrically for consumption and use by the JSpOC and other users.			
FY 2015 Accomplishments: Completed exposure of three classified data sources (Concept C, Concept J, and Concept G). Completed Ground-based Electro-Optical Deep Space Surveillance System (GEODSS) net-centric delivery.			
FY 2016 Plans: N/A			
FY 2017 Plans:			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force	Date: February 2016
---	----------------------------

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A012 / <i>Net-centric Sensors and Data Sources</i>
--	--	--

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
N/A			
Accomplishments/Planned Programs Subtotals	6.724	0.000	0.000

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

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• OPAF: BA03: 836790: <i>Space Mods Space</i>	4.577	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.110

Remarks

D. Acquisition Strategy

Project utilizes existing engineering and study contracts and a competitively selected system engineering team to conduct sensor and data source activities.

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.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A012 / <i>Net-centric Sensors and Data Sources</i>
--	--	--

Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Sensor Data Exposure - Sidecar Development	C/Variou	MIT/LL : Lexington, MA	11.569	0.000		0.000		0.000		0.000		0.000	0.000	11.569	11.569
Net-Centric Capability Development and Data Exposure	Various	Various : Various	28.318	4.494	Jan 2015	0.000		0.000		0.000		0.000	0.000	32.812	36.317
Technical Mission Analysis (WS)	Various	Various : Various	0.000	0.363	Nov 2014	0.000		0.000		0.000		0.000	0.000	0.363	-
N-CSDS Enterprise Systems Engineering and Integration	C/CPFF	Lockheed Martin Integrated Systems : Endicott, NY	15.300	0.000		0.000		0.000		0.000		0.000	0.000	15.300	15.300
Subtotal			55.187	4.857		0.000		0.000		0.000		0.000	0.000	60.044	-

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test and Evaluation Activities	RO	46th Test Squadron : Eglin AFB, FL	1.353	0.078	Jan 2015	0.000		0.000		0.000		0.000	0.000	1.431	1.713
Subtotal			1.353	0.078		0.000		0.000		0.000		0.000	0.000	1.431	1.713

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A012 / <i>Net-centric Sensors and Data Sources</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Concept C	1	2015	2	2015
Common Data Model (Integration with JMS)	1	2015	4	2015
Concept J Database Exposure Adapters	2	2015	2	2015
Concept G	3	2015	4	2015
GEODSS Site 1 Operational Test	4	2015	4	2015

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A026 / <i>C-Band Radar</i>
--	--	--

COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
65A026: <i>C-Band Radar</i>	18.774	2.307	0.884	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	21.965
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

A Memorandum of Understanding (MOU) between the United States Air Force and the Australian Department of Defence was signed by the United States Secretary of Defense and the Australian Minister for Defence on November 14, 2012 to support this international effort to provide an improved space situational awareness capability in the Australian geographic area. The MOU includes description of the need for Australian funding for part of the relocation project. The project will relocate a C-Band radar to Harold E. Holt Naval Communications Station (HEH NCS) in Australia and upgrade it to perform a Space Situational Awareness (SSA) mission. When completed, the radar will provide data for catalog maintenance, space object identification, and support for special events (e.g., space launches, satellite breakups, and maneuvers).

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

	FY 2015	FY 2016	FY 2017
Title: C-Band Radar	2.307	0.884	-
Description: Relocates a C-Band Radar to Harold E. Holt Naval Communications Station (HEH NCS) in Australia and upgrades it to perform a Space Situational Awareness (SSA) mission.			
FY 2015 Accomplishments: Completed radar assembly and system upgrades.			
FY 2016 Plans: Complete Developmental Test and Evaluation, Operational Test and Evaluation, and Initial Operating Capability (IOC).			
Accomplishments/Planned Programs Subtotals	2.307	0.884	-

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

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• OPAF: PE 35940F: Line Item # 861900: <i>C-Band Radar Spares and Repairs</i>	0.000	4.868	4.861	0.000	4.861	0.000	0.000	0.000	0.000	0.000	9.729

Remarks

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A026 / <i>C-Band Radar</i>

D. Acquisition Strategy

This project will utilize a mix of experienced contractors, FFRDC and Air National Guard resources to upgrade the C-Band system and complete the relocation to Australia.

The MOU between the United States Air Force and the Australian Department of Defence includes the need for Australian funding for part of the relocation project. Site renovation in Australia began in FY 2013 as Australian funding became available.

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.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A026 / <i>C-Band Radar</i>
--	--	--

Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
C-Band Radar Upgrades	TBD	Various : Various	16.924	0.641	Dec 2014	0.044	Dec 2015	0.000		0.000		0.000	0.000	17.609	15.665
Subtotal			16.924	0.641		0.044		0.000		0.000		0.000	0.000	17.609	15.665

Remarks
Funding will be used to complete the Radar Open Systems Architecture (ROSA) and Space Surveillance Support Software (S4) upgrades to the existing C-Band Radar.

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DISA	WR	DISA : Ft Meade, MD	0.005	0.000		0.000		0.000		0.000		0.000	0.000	0.005	0.005
Subtotal			0.005	0.000		0.000		0.000		0.000		0.000	0.000	0.005	0.005

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test, Operational Test, & Initial Operating Capability Test	Various	Various : Los Angeles, CA	0.654	0.218	Oct 2014	0.022	Oct 2015	0.000		0.000		0.000	0.000	0.894	0.613
Subtotal			0.654	0.218		0.022		0.000		0.000		0.000	0.000	0.894	0.613

Remarks
Test support is being provided by the 96th Test Wing Eglin AFB and 17th Test Squadron Schriever AFB.

Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
A&AS	Various	Various : Los Angeles, CA	1.191	1.448	Oct 2014	0.818	Oct 2015	0.000		0.000		0.000	0.000	3.457	2.889

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A026 / <i>C-Band Radar</i>

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Complete Radar Renovation/Relocation	██████																											
Complete Design/Development	██████████																											
Test					██████████																							
Operational Acceptance (Sep 2016)									████																			

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604425F / <i>Space Situation Awareness Systems</i>	Project (Number/Name) 65A026 / <i>C-Band Radar</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Complete Radar Renovation/Relocation	1	2015	2	2015
Complete Design/Development	1	2015	4	2015
Test	1	2016	4	2016
Operational Acceptance (Sep 2016)	4	2016	4	2016