Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force												Date: March 2014
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305940F / *Space Situation Awareness Operations*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	16.730	12.684	11.596	-	11.596	10.862	-	-	-	-	51.872
67A017: *Sensor Service Life Extension Program*	-	16.730	12.684	11.596	-	11.596	10.862	-	-	-	-	51.872
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Space Situational Awareness (SSA) is knowledge of all aspects of space related to operations. As the foundation for space control, SSA encompasses surveillance of all space objects and activities; detailed reconnaissance of specific space assets; monitoring space environmental conditions; monitoring cooperative space assets; intelligence on adversary space operations; and conducting integrated command, control, communications, processing, analysis, dissemination, and archiving activities. Program Element 0305940F, Space Situational Awareness Operations, fields, upgrades, operates and maintains Air Force sensors and information integration capabilities within the SSA network while companion program element 0604425F, Space Situational Awareness Systems, develops new network sensors and improved information integration capabilities across the network. Activities funded in the SSA Operations program element focus on surveillance of objects in earth orbit to aid tasks including satellite tracking; space object identification; tracking and cataloging; satellite attack warning; notification of satellite flyovers to U.S. forces; space treaty monitoring; and technical intelligence gathering.

The Sensor Service Life Extension Programs (SLEP) in this program element fund efforts to upgrade and extend the life of operational SSA sensors, as needed. These SLEPs include, but are not limited to, programs that extend the serviceable life of assets and maintain critical capability by replacing aging and increasingly unsustainable components with modern equipment. SLEPs may incorporate equipment which inherently includes technological advances resulting in enhanced or increased capabilities. In addition, the SLEP itself may be designed to increase certain capabilities. The current efforts of Eglin, Haystack Ultra-wideband Satellite Imaging Radar (HUSIR), and Ground-based Electro Optical Deep Space Surveillance (GEODSS) are representative of sensor systems in the SLEP project. As the need arises in the execution year, funds in this project may be used to begin sensor life extension programs on additional efforts. These efforts are in Budget Activity 7, Operational System Development, because they develop modifications for operational SSA sensors.

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B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	19.586	18.807	11.740	-	11.740
Current President's Budget	16.730	12.684	11.596	-	11.596
Total Adjustments	-2.856	-6.123	-0.144	-	-0.144
• Congressional General Reductions	-0.026	-0.123			
• Congressional Directed Reductions	-	-6.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.345	-			
• Other Adjustments	-1.485	-	-0.144	-	-0.144

Change Summary Explanation

FY13: Congressional General Reductions (-$.026M)
FY13: Sequestration Reduction (-$1.485M)
FY13: SBIR Reduction (-$1.345M)

FY14: Congressional General Reduction (-$6.0)

FY15: Non-Pay Inflation Adjustment (-$.144)

C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Eglin SLEP	4.726	8.248	1.412
Description: The Eglin SLEP extends the operational life of the AN/FPS-85 Radar, located at Eglin AFB, through 2018. The program performs upgrades to the hardware and software of the radar system to maintain system performance, operability and sustainment to support USSTRATCOM's Space Surveillance Network (SSN) near earth and deep space metric tracking and space object identification (SOI) missions.			
FY 2013 Accomplishments: Conducted effort to correct deficiencies for phase I Control and Signal Processor Upgrade (CSPU) portion of the SLEP - Identified deficiencies during CSPU Force Development Evaluation (FDE) operational test. Phase II Beam Steering Control Upgrade (BSCU) portion of the SLEP paused due to phase I activities.			
FY 2014 Plans:			

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue to correct deficiencies, and will re-accomplish Developmental Test and Evaluation (DT&E), and re-enter FDE operational test for phase I, CSPU. ***FY 2015 Plans:*** Will complete phase I of the SLEP - CSPU trial period and operational acceptance.			
Title: HUSIR ***Description:*** The HUSIR program upgrades the Haystack radar's X-band 1 MHz bandwidth system by adding a W-band 8GHz capability and enhancing imaging resolution to support SSN object characterization and tracking. ***FY 2013 Accomplishments:*** Completed the refurbished bearing characterization, completed control system tuning/testing, completed radar integration and test with X-band initially, aligned and verified antenna surface alignment with holography/laser radar measurements, X-band entered in Trial Period (TP), commenced W-band Integration and Test (I&T) testing. ***FY 2014 Plans:*** Completing W-Band I&T Testing, perform AF Radar acceptance W-Band Military Utility Assessment (MUA). Engaging in dual-band trial period and J65 certification to complete the project.	5.087	0.300	-
Title: GEODSS SLEP ***Description:*** The GEODSS effort extends the operational life of the Ground Based Electro-Optical Deep Space Surveillance System (GEODSS). It replaces the aging Sensor Controller Group (SCG), Data Processing Group (DPG), Data Communications Group (DCG), Auxillary Instrumentation Group (AIG), and other unsupportable subsystems as required to maintain SSN tracking capabilities for objects in deep space and geosyncronous orbits. ***FY 2013 Accomplishments:*** Integrated, assembled, tested, and installed Sensor Controller Group equipment for Site 1. ***FY 2014 Plans:*** Awarding contract for Phase II of SLEP to upgrade subsystems with sustainability issues, such as the Data Processing Group (DPG), Auxilliary Group (AIG), and Data Communications Group (DCG). ***FY 2015 Plans:*** Will conduct Preliminary Design Review (PDR) and Critical Design Review (CDR) for Phase II SLEP.	2.611	4.136	10.184
Title: GLOBUS II SLEP	4.306	-	-

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Description: The Globus SLEP extends the operational life of the GLOBUS II Radar, located in Vardo, Norway. It replaces aging and unsustainable hardware groups including the transmitter, mission critical computing resources (MCCR), receiver-exciter (REX) subsystems, and other unsupportable subsystems as required. ***FY 2013 Accomplishments:*** Conducted Critical Design Review. Purchased hardware and began in-plant testing, integration, and system assessments. ***FY 2014 Plans:*** Project funding is transferred to a new Program Element.			
Accomplishments/Planned Programs Subtotals	16.730	12.684	11.596

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPAF: BA03: 836790: *Space Mods Space*	3.391	-	3.124	-	3.124	3.981	2.189	-	-	-	7.050

Remarks

The procurment funds will be used to acquire, install and test, mod kits for sites 2 and 3 of the GEODSS SLEP.

E. Acquisition Strategy

The Eglin SLEP effort is replacing key radar items via an option on the Systems Engineering and Sustainment Integrator (SENSOR) contract, competitively awarded to ITT Corporation (now Exelis) in 2002. The Air Force uses the SENSOR contract for sustaining and upgrading various Air Force systems, including the Eglin radar. The radar continues to be operational during the SLEP.

The Massachusetts Institute of Technology's Lincoln Laboratory (MIT/LL), a non-profit Federally-Funded Research & Development Center, performs the HUSIR effort under a master contract with the Air Force Life Cycle Management Center, in conjunction with support from other agencies as required. This effort is considered as applied research under that contract. MIT/LL transferred ownership of the radar to the Air Force but continues to operate it as part of its Lincoln Space Surveillance Complex per contract with the Air Force. MIT/LL will be responsible for operations and sustainment of the upgraded Haystack radar. The upgrade effort is post Milestone C and is scheduled to complete in FY14.

The GEODSS SLEP was awarded as an option on the SENSOR contract. The GEODSS SLEP uses a phased development and deployment strategy to reduce risk. The system is in operation during the SLEP and is considered post-Milestone C.

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F. 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.

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305940F / *Space Situation Awareness Operations*	**Project (Number/Name)** 67A017 / *Sensor Service Life Extension Program*

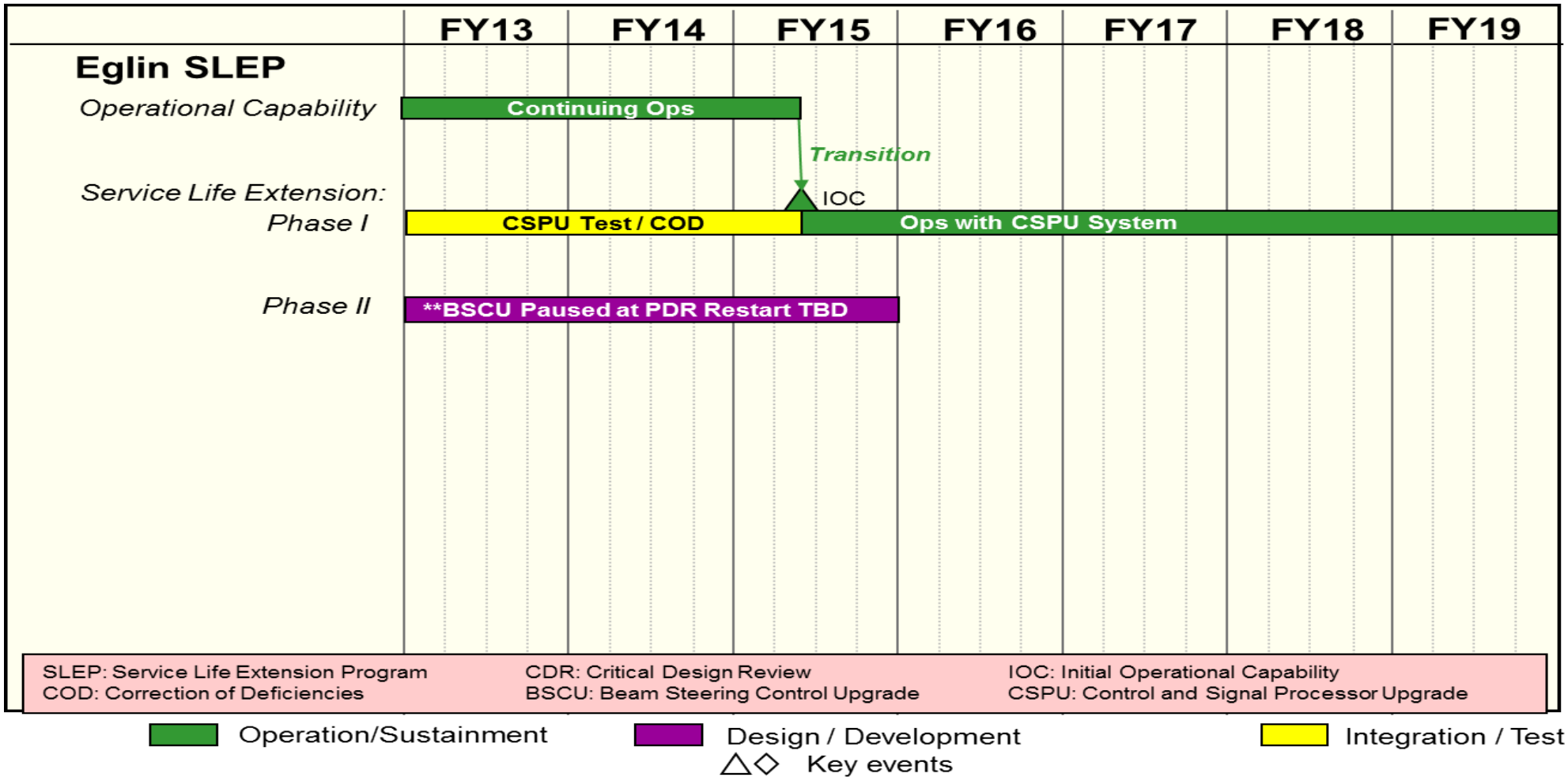
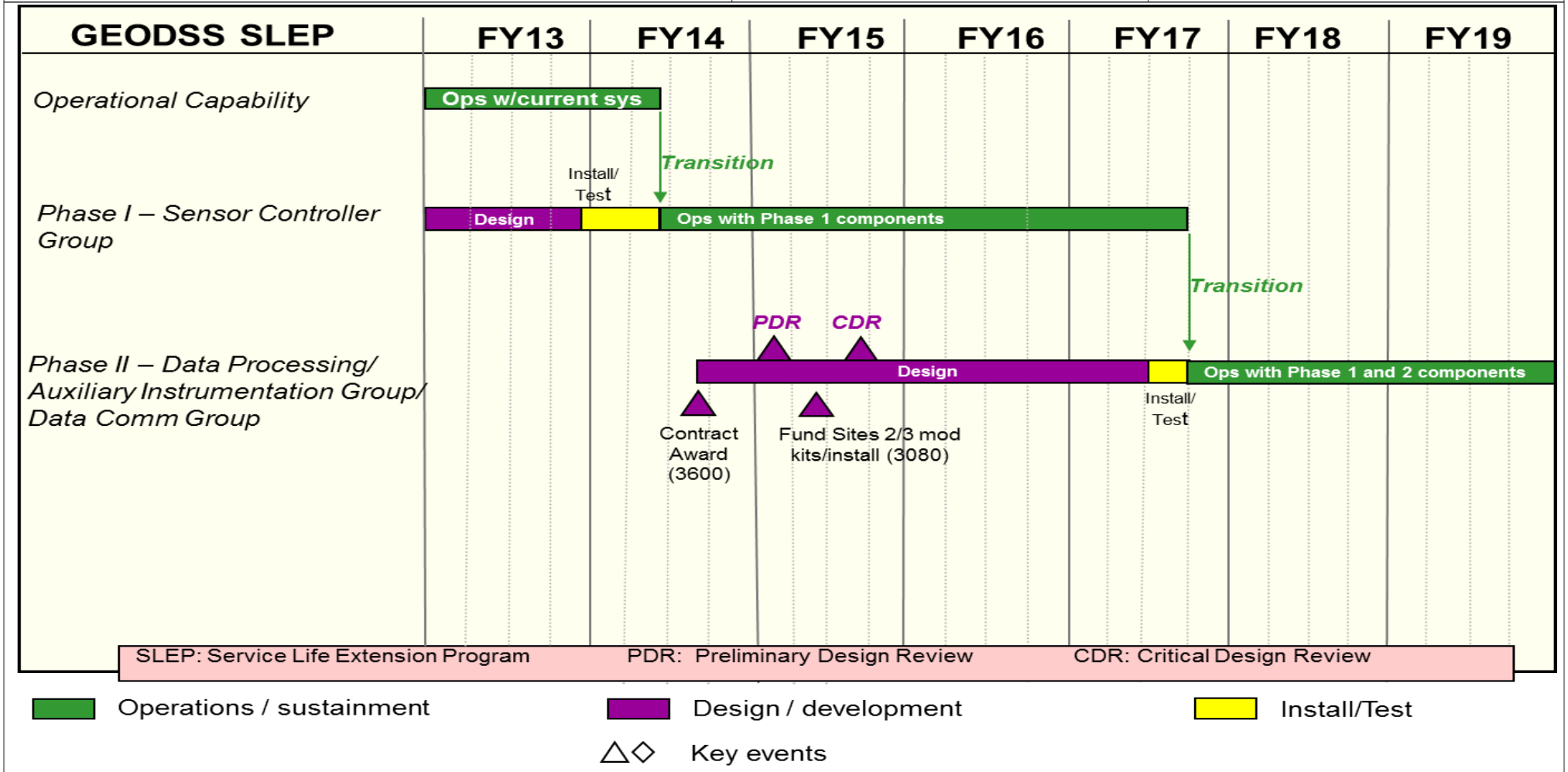


Exhibit R-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305940F / *Space Situation Awareness Operations*	**Project (Number/Name)** 67A017 / *Sensor Service Life Extension Program*



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