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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force **Date:** March 2014

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 0305174F / <i>Space Innovation, Integration and Rapid Technology Development</i>
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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	-	2.149	2.469	2.480	-	2.480	2.525	2.571	2.622	2.672	Continuing	Continuing
67A011: <i>Space Analysis and Application Development</i>	-	2.149	2.469	2.480	-	2.480	2.525	2.571	2.622	2.672	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

Located at Peterson AFB, Colorado, the Space Innovation, Integration and Rapid Technology Development program develops and modifies modeling and simulation tools that Air Force Space Command's Space Analysis Center uses for operations research, military utility analyses, tradeoff studies, and other evaluations of space mission areas to guide planning, programming, requirements generation, analyses of alternatives, and other activities. Development activities incorporate changes in fielded and projected space operational capabilities, as well as technical improvements, into the group's software tools to ensure their data and technology remain current. Its innovation, education, and training activities foster solutions to operational deficiencies and enhance the integration of space systems into Air Force operations, thereby enabling service and joint warfighters to realized the full potential of existing and planned space capabilities.

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 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	2.430	2.469	2.511	-	2.511
Current President's Budget	2.149	2.469	2.480	-	2.480
Total Adjustments	-0.281	-	-0.031	-	-0.031
• Congressional General Reductions	-0.003	-			
• Congressional Directed Reductions	-0.208	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.070	-	-0.031	-	-0.031

Change Summary Explanation

FY13: -\$0.208M for Sequestration

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-\$0.070M for higher priority needs FY15: -\$0.031M for inflation adjustment				
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
Title: Model Development/Modification		0.951	1.136	1.124
Description: Develops, verifies, and validates new models for space mission areas and modifies existing models to portray new capabilities. Models used by the Air Force Space Command's (AFSPC) Space Analysis Center for military utility analyses, trade studies, and other evaluations of space programs supporting program offices at the Space and Missile Center, HQ AFSPC and other activities with a space focus.				
FY 2013 Accomplishments: Developed and modified several models and tools in support of space and cyber analysis. SSNAM (Space Surveillance Network Analysis Model)- Updated for new concept implementation (space/ground, radar/optical), near earth SP finalization, and GUI enhancements. SEAS (System Effectiveness Analysis Simulation)- Updated tool supported Warfighter Vignette Analysis efforts providing AFSPC leadership insights into the impact of space and cyberspace capabilities on military operations. SCORE (System CONOPs and Requirement Environment)- Improved fidelity of ISR modeling, including command and control, sensor representation, and communications. SLAMEM (Simulations of Locations and Attach of Mobil Enemy Missiles) - Modifications supported upcoming AOAs and studies for OPIR, DSP, SBIRS, ITW/AA C2 SCINTERR (Ionosphere Scintillation Error) Model - Ionospheric scintillation forecast accuracy modifications integrated into mission models like GIANT, SCORE, SLAMEM, EADSIM and various communications analysis tools MASTR (Missile Algorithmic Strategic and Tactical Requirements) - Successfully used, and will continue to be used, to facilitate V&V of the MARS, PDS-M and SISF operational MW systems at CMOC, USSTRATCOM and JSpOC CORFUS (Correlation/Fusion) - Development of CORFUS is to develop a model to examine state vectors and covariance at missile burnout OPMAP (Operation) - OPMAP improvements are directed towards GPS reliability predictions for multi-mission platform SAINT (Space Analysis Integration Tool) - Finish the addition of space analysis capability to the toolbox within SAINT. SAINT is designed to build analysis tools, such as SATRAK 7, using components within its toolbox STORM - Improve space/cyber representation in STORM. Enhance STORM non-lethal effects modeling Space Brawler - Develop space mission model				
FY 2014 Plans: Develop and modify several models and tools in support of space and cyber analysis. Continue work on FY2013 accomplishments. SSNAM - Simulating SSN used on launch folder issues for COBRA DANE. Run for analysis of space fence effects on the SSN.				

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
SEAS - Update tool to support Warfighter Vignette Analysis efforts providing AFSPC leadership insights into the impact of space and cyberspace capabilities on military operations. SCORE - Upgrade to support Protected comm and ITW/AA analysis SLAMEM - Support upcoming AOAs and studies for OPIR, DSP, SBIRS, ITW/AA C2. SCINTERR Model - Integrate Ionospheric scintillation forecast accuracy modifications into mission models like GIANT, SCORE, SLAMEM, EADSIM and various communications analysis tools. FY 2015 Plans: Develop and modify several models and tools in support of space and cyber analysis. Continue building on FY 2014 activities. SCORE - Upgrade to support Protected comm and ITW/AA analysis SSNAM - Simulate SSN used on launch folder issues STORM - Improve space/cyber representation in STORM. Enhance STORM non-lethal effects modeling SLAMEM - Continue modifications to support upcoming AOAs and studies. SCINTERR Model - Continue integration of Ionospheric scintillation forecast accuracy modifications into mission models and various communications analysis tools. Other model modifications as needed based on leadership questions				
Title: Model Verification Description: Verification of model changes. FY 2013 Accomplishments: Verified model changes resulting from Model Development and Modification efforts. FY 2014 Plans: Verification of model changes resulting from Model Development and Modification efforts. FY 2015 Plans: Verification of model changes resulting from Model Development and Modification efforts.		0.466	0.518	0.527
Title: Model Validation Description: Validation of model change results. FY 2013 Accomplishments: Validated model changes resulting from Model Development and Modification efforts. FY 2014 Plans:		0.732	0.815	0.829

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
Validation of model changes resulting from Model Development and Modification efforts.			
FY 2015 Plans: Validation of model changes resulting from Model Development and Modification efforts.			
Accomplishments/Planned Programs Subtotals		2.149	2.469
D. Other Program Funding Summary (\$ in Millions)			
Line Item	FY 2013	FY 2014	FY 2015 Base
• OPAF: BA03: Line Item # 834010: <i>General Information Technology</i>	1.284	0.919	1.300
			FY 2015 OCO
			-
			FY 2015 Total
			1.300
			FY 2016
			1.500
			FY 2017
			1.527
			FY 2018
			1.555
			FY 2019
			1.583
			Cost To Complete
			Continuing
			Total Cost
			Continuing
Remarks Funding and content procures equipment for the SIIRTD distributed communications architecture and computing equipment supporting analysis capabilities.			
E. Acquisition Strategy Any new projects funded in this program will be awarded using competitive procedures to the maximum extent possible.			
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.			

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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 0305174F / *Space Innovation, Integration and Rapid Technology Development*

Project (Number/Name)

67A011 / Space Analysis and Application Development

Space Innovation, Integration and Rapid Technology Development (SIIRTD) Schedule

	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Space Analysis Center <i>Modeling & simulation activities for space mission areas</i>							
	Modeling tool development, modification, verification, and validation						
	Operations using existing models						