Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force											Date: February 2015	

Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305174F *I Space Innovation, Integration and Rapid Technology Development*							

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	2.409	2.071	1.543	-	1.543	3.129	2.985	2.649	2.697	Continuing	Continuing
67A011: *Space Analysis and Application Development*	-	2.409	2.071	1.543	-	1.543	3.129	2.985	2.649	2.697	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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 realize 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.

The FY2016 funding request was reduced by -$.917M to account for the availability of prior execution balances.

B. Program Change Summary ($ in Millions)

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	2.469	2.480	2.525	-	2.525
Current President's Budget	2.409	2.071	1.543	-	1.543
Total Adjustments	-0.060	-0.409	-0.982	-	-0.982
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-0.409			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.060	-			
• Other Adjustments	-	-	-0.982	-	-0.982

Change Summary Explanation
The FY2016 funding request was reduced by $.917 million to account for the availability of prior execution balances.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force			Date: February 2015		

Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* I BA 7: *Operational Systems Development*	R-1 Program Element (Number/Name) PE 0305174F I *Space Innovation, Integration and Rapid Technology Development*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Model Development/Modification	1.156	0.994	0.741
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. Develop and modify several models and tools in support of space and cyber analysis, including, but not limited to the following: Space Surveillance Network Analysis Model (SSNAM), System Effectiveness Analysis Simulation (SEAS), System CONOPS and Requirements Environment (SCORE), Simulation of Locations and Attack of Mobile Enemy Missiles (SLAMEM), Scintillation Error Model (SCINTERR), Extended Air Defense Simulation (EADSIM), and Synthetic Theatre Operations Research Model (STORM). *FY 2014 Accomplishments:* Developed and modified several models and tools in support of space and cyber analysis. SSNAM - Simulating SSN used on launch folder issues for COBRA DANE. Run for analysis of space fence effects on the SSN. 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 *FY 2016 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			

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force	Date: February 2015
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305174F *I Space Innovation, Integration and Rapid Technology Development*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
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 2014 Accomplishments:* Verified model changes resulting from Model Development and Modification efforts. *FY 2015 Plans:* Verification of model changes resulting from Model Development and Modification efforts. *FY 2016 Plans:* Verification of model changes resulting from Model Development and Modification efforts.	0.506	0.435	0.324
Title: Model Validation *Description:* Validated model change results. *FY 2014 Accomplishments:* 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. *FY 2016 Plans:* Validation of model changes resulting from Model Development and Modification efforts.	0.747	0.642	0.478
Accomplishments/Planned Programs Subtotals	2.409	2.071	1.543

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 834010: *General Information Technology*	0.919	1.289	1.221	-	1.221	1.664	1.637	1.561	1.588	Continuing	Continuing

Exhibit R-2, **RDT&E Budget Item Justification:** PB 2016 Air Force	**Date:** February 2015
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305174F *I Space Innovation, Integration and Rapid Technology Development*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015	

| Appropriation/Budget Activity
3600 I 7 | | | | R-1 Program Element (Number/Name)
PE 0305174F I Space Innovation,
Integration and Rapid Technology
Development | | | | | | | | Project (Number/Name)
67A011 I Space Analysis and Application
Development | |

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Develop/modify software tools/models	C/FP	Various : Various,	-	0.940	Sep 2014	0.808	Nov 2014	0.602	Nov 2015	-		0.602	Continuing	Continuing	TBD
Develop/modify software tools and models	C/FP	Various : Various,	-	1.469	Jan 2014	1.263	Nov 2014	0.941	Nov 2015	-		0.941	Continuing	Continuing	TBD
		Subtotal	-	2.409		2.071		1.543		-		1.543	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Subtotal	-	-		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Subtotal	-	-		-		-		-		-	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Subtotal	-	-		-		-		-		-	-	-	-

	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	2.409	2.071	1.543	-	1.543	-	-	-

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2016 Air Force		**Date:** February 2015
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*

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
Model development/modification, verification, and validation	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██	██

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 *I* 7	**R-1 Program Element (Number/Name)** PE 0305174F *I Space Innovation, Integration and Rapid Technology Development*	**Project (Number/Name)** 67A011 *I Space Analysis and Application Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Model development/modification, verification, and validation	1	2014	4	2020