Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 4: *Advanced Component Development & Prototypes (ACD&P)*				R-1 ITEM NOMENCLATURE PE 0603791F: *International Space Cooperative R&D*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	0.581	0.615	0.652	-	0.652	0.661	0.674	0.692	0.702	Continuing	Continuing
645035: *Intl Space Coop R&D*	0.581	0.615	0.652	-	0.652	0.661	0.674	0.692	0.702	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

These funds will be used to initiate space-related international cooperative research, and development (ICR&D) agreements with North Atlantic Treaty Organization (NATO) member states, major non-NATO allies and friendly foreign countries. Each of the selected programs and projects are required to have a concluded IA, prior to funds being released, that implements the provisions of Title 10 U.S. Code, Section 2350a. The legislation (Title 10 U.S. Code, Section 2350) authorizes funds to significantly improve U.S. and allied conventional defense capabilities by leveraging the best defense technologies, eliminating costly duplication of R&D efforts, accelerating the availability of defense systems, and promoting US and allied interoperability or commonality. These funds will not be used for government civilian salaries, permanent construction, or spent overseas. This program element funds the implementation of Air Force ICR&D agreements in (1) Basic Research (2) Applied Research (3) Advanced Technology Development (4) Advanced Component Development and Prototypes (5) System Development and Demonstration and (6) RDT&E Management Support.

This PE is designated in Budget Activity 4 because most of the ICR&D projects support specific systems, include all efforts necessary to evaluate integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology, and help expedite technology transition from the laboratory to operational use. These funds are not to be used for civilian salaries or the construction of permanent facilities.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	0.635	0.642	0.651	-	0.651
Current President's Budget	0.581	0.615	0.652	-	0.652
Total Adjustments	-0.054	-0.027	0.001	-	0.001
• Congressional General Reductions	-	-0.027			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.018	-			
• Other Adjustments	-0.036	-	0.001	-	0.001

Change Summary Explanation

FY11: Cong General Reductions -0.036, Cong Directed Reductions 0.0, Cong Adds 0.0, Cong Directed Transfers 0.0 are shown in Other Adjustments Row

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Post Mission Analysis of High Frequency (HF) Radar ***Description:*** Post Mission Analysis of High Frequency (HF) Radar (AFSPC and Australia). ***FY 2011 Accomplishments:*** Cooperative project with Australia to demonstrate the potential of improved Ballistic Missile Defense and warning applications by fusing Overhead Persistent Infrared Radar data and Australia's High Frequency Radar component technologies/data. ***FY 2012 Plans:*** Continuation of cooperative project with Australia to demonstrate the potential of improved Ballistic Missile Defense and warning applications by fusing Overhead Persistent Infrared Radar data and Australia's High Frequency Radar component technologies/data. N/A	0.350	0.306	-	-	-
Title: Ionospheric Effects on Intel, Surveillance and Reconnaissance, Space Situational Awareness and Defensive Counterspace ***Description:*** Ionospheric Effects on Intel, Surveillance and Reconnaissance, Space Situational Awareness and Defensive Counterspace (AFSPC and UK) ***FY 2011 Accomplishments:*** Cooperative effort with the United Kingdom to increase capabilities to users of current and future military systems adversely affected by the ionosphere ***FY 2012 Plans:*** Cooperative effort with the United Kingdom to increase capabilities to users of current and future military systems adversely affected by the ionosphere ***FY 2013 Base Plans:*** continuation of cooperative effort with the United Kingdom to increase capabilities to users of current and future military systems adversely affected by the ionosphere ***FY 2013 OCO Plans:***	0.231	0.309	0.352	-	0.352

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
N/A					
Title: Nanosatellites Plug and Play Architectures II (NAPA II) ***Description:*** Cooperative effort with Sweden to develop joint nano-satellite based on plug-and-play architecture with synthetic aperture radar (SAR) payload; Development of “push-button” toolflows integrating ground, user, and launch segments for “designer” nanosatellites ***FY 2013 Base Plans:*** Cooperative effort with Sweden to develop joint nano-satellite based on plug-and-play architecture with synthetic aperture radar (SAR) payload; Development of “push-button” toolflows integrating ground, user, and launch segments for “designer” nanosatellites ***FY 2013 OCO Plans:*** N/A	-	-	0.100	-	0.100
Title: Hyper-Temporal Imaging (HTI) Exploitation and Validation of Technology ***Description:*** Cooperative effort with Australia to explore future use of HTI systems for early missile detection and persistent surveillance; Exploit HTI data sets to evaluate range of surveillance products; and demonstrate military utility of AFRL HTI space experiment through integrated tests & exercises ***FY 2013 Base Plans:*** Cooperative effort to explore future use of HTI systems for early missile detection and persistent surveillance; Exploit HTI data sets to evaluate range of surveillance products; and demonstrate military utility of AFRL HTI space experiment through integrated tests & exercises " ***FY 2013 OCO Plans:*** N/A	-	-	0.200	-	0.200
Accomplishments/Planned Programs Subtotals	0.581	0.615	0.652	-	0.652

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• N/A: *N/A*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force	DATE: February 2012
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E. Acquisition Strategy

A principal goal of the International Space Cooperative R&D program is to effectively utilize the aggregate resources invested by the US and our allies in space-related R&D. This program element provides the critical funding incentive needed to pursue space-related ICRD&A agreements and helps to (a) leverage USAF and allied resources through cost sharing and economies of scale; (b) exploit the best US and allied technologies for equipping coalition forces; (c) demonstrate areas of commonality or interoperability with our allies; and (d) accelerate the availability of defense technology and systems. Candidate projects are reviewed and approved by the USD(AT&L). An international agreement defining project objectives, responsibilities and costs is required prior to release of funds. To obtain these funds and ensure service commitment, projects are selected from existing or new space-related RDT&E programs funded in the Future Years Defense Plan (FYDP). Project offices must show matching funds and contributions from associated program elements and equitable allied funding. As appropriate, funding responsibility for out-year requirements and follow-on efforts are transferred to the project office and associated program elements. Most contracts are awarded after full and open competition.

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 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603791F: *International Space Cooperative R&D*	**PROJECT** 645035: *Intl Space Coop R&D*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603791F: *International Space Cooperative R&D*	**PROJECT** 645035: *Intl Space Coop R&D*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Post Mission Analysis of High Frequency Radar - Overhead Persistant Infrared Data Fusion Experiments for Early Launch Detection and Tracking	1	2011	1	2011
- Technical Development	1	2011	4	2011
Ionospheric Effects on Intel, Surveillance and Reconnaissance, Space Situational Awareness and Defensive Counterspace	1	2012	4	2017
-Signed Agreement	1	2012	1	2012
-Research, Development, Test, and Evaluation	2	2012	3	2017
Final Report	3	2017	4	2017
Nanosatellites and Plug and Play Architectures II (NAPA II)	1	2013	4	2015
---signed agreement	2	2013	2	2013
---testing and evaluation	3	2013	4	2014
----final report	4	2014	4	2015
Hyper-Temporal Imaging (HTI) Exploitation and Validation of Technology	1	2013	4	2017
agreement development and signature	1	2013	2	2013
testing and evaluation	2	2013	4	2017
final report completion	4	2017	4	2017