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

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 0604270F / <i>Electronic Warfare Development</i>							
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	-	1.971	7.815	0.929	-	0.929	2.601	2.434	2.062	2.100	Continuing	Continuing
653891: <i>Advanced IR Counter Measures (AIRCM)</i>	-	1.971	7.815	0.929	-	0.929	2.601	2.434	2.062	2.100	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program consolidates Air Force funding and management of common Electronic Warfare (EW) systems from Materiel Solutions Analysis through Engineering and Manufacturing Development and transition to operational capability. EW is an integral warfighting effect supporting AF Global Strike, Global Persistent Attack and Global Mobility operations as well as Joint-Coalition operations. EW systems influence, deceive, disrupt, degrade, deny, and destroy threats to air operations throughout the electromagnetic spectrum. This program supports Electronic Support (ES), Electronic Protection (EP), and Electronic Attack (EA). ES programs support the collection, analysis, and dissemination of information related to the detection, geo-location, characterization, and identification of threats to air operations. EP Programs preserve the electromagnetic spectrum for use by friendly forces. EA programs provide self-protection through active and passive measures that deceive threats to air operations using kinetic and non-kinetic means to defeat threats that rely on the electromagnetic spectrum (Radio Frequency (RF), Electro-Optical (EO), Infrared (IR)).

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.

B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	1.971	1.965	1.967	-	1.967
Current President's Budget	1.971	7.815	0.929	-	0.929
Total Adjustments	-	5.850	-1.038	-	-1.038
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-1.900			
• Congressional Adds	-	7.750			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-1.038	-	-1.038

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 653891: *Advanced IR Counter Measures (AIRCM)*
Congressional Add: *ANG Digital Radar Warning Receiver (RWR)*

FY 2014	FY 2015
-	7.750

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<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2014	FY 2015
Congressional Add Subtotals for Project: 653891		-	7.750
Congressional Add Totals for all Projects		-	7.750
<u>Change Summary Explanation</u> FY15 - Congressional Add for +\$7.750M for Digital Radar Warning Receiver for ANG; Congressional Reduction for -\$1.9M for Forward financing. The FY2016 funding request was reduced by \$1.038 million to account for the availability of prior execution balances.			

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604270F / <i>Electronic Warfare Development</i>				Project (Number/Name) 653891 / <i>Advanced IR Counter Measures (AIRCM)</i>			
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
653891: <i>Advanced IR Counter Measures (AIRCM)</i>	-	1.971	7.815	0.929	-	0.929	2.601	2.434	2.062	2.100	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The Advanced Infrared Countermeasure (AIRCM) project contains related aircraft self-protection efforts aimed at increasing aircraft survivability against the increasing threat of sophisticated infrared-guided surface-to-air and air-to-air missiles. These missiles may employ sophisticated next-generation electro-optics or dual-mode IR and radio frequency seekers. AIRCM will provide advanced IR expendable countermeasures and/or IRCM techniques that will be functionally compatible with existing dispenser systems and employed across multiple USAF weapons systems. This also explicitly includes any and all flare and decoy development and testing that may be demanded or needed in current operations supporting the war on terrorism regardless of aircraft platform. Similar activities that are supplementary to this effort may be accomplished ad hoc using platform specific funding or through other testing activities such as joint services or NATO test groups.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2014	FY 2015	FY 2016	
Title: IR Flare Testing									1.971	0.065	0.929	
Description: IR flare testing and qualification on aircraft												
FY 2014 Accomplishments: Qualified IR flare cocktails on various aircraft.												
FY 2015 Plans: Activities include testing and qualification of IR flare cocktails on various aircraft.												
FY 2016 Plans: Activities include testing and qualification of IR flare cocktails on various aircraft.												
Accomplishments/Planned Programs Subtotals									1.971	0.065	0.929	
							FY 2014	FY 2015				
Congressional Add: ANG Digital Radar Warning Receiver (RWR)							-	7.750				
FY 2015 Plans: Activities include development, integration and test of digital radar warning receivers on ANG aircraft.												
Congressional Adds Subtotals							-	7.750				

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Appropriation/Budget Activity 3600 / 5				R-1 Program Element (Number/Name) PE 0604270F / <i>Electronic Warfare Development</i>				Project (Number/Name) 653891 / <i>Advanced IR Counter Measures (AIRCM)</i>			
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PAAF: BA01: Line Item # 356010: <i>Flares</i>	49.194	73.356	103.565	-	103.565	114.623	97.451	109.359	101.185	Continuing	Continuing
Remarks											
Qualified flares, if not in AF inventory, will be procured under program 0208030F War Reserve Munitions, Flares.											
D. Acquisition Strategy											
Do not anticipate need to award contracts as activities will be completed with Military Interdepartmental Purchase Requests.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force													Date: February 2015		
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 0604270F / <i>Electronic Warfare Development</i>				Project (Number/Name) 653891 / <i>Advanced IR Counter Measures (AIRCM)</i>					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Digital RWR development	MIPR	TBD : ,	-	-		7.750		-		-		-	Continuing	Continuing	-
Subtotal			-	-		7.750		-		-		-	-	-	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Aircraft/Unit Support	MIPR	AATC : Tucson, AZ	-	0.326	May 2014	-		0.225	May 2016	-		0.225	Continuing	Continuing	-
Mission Planning	MIPR	TBD : ,	-	0.250	May 2014	0.045	May 2015	0.125	May 2016	-		0.125	Continuing	Continuing	-
Subtotal			-	0.576		0.045		0.350		-		0.350	-	-	-
Remarks Performing activities dependent on test participants.															
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Modeling and Simulation	MIPR	Air Force Research Laboratory : WPAFB, OH	-	0.275	May 2014	-		0.125	May 2016	-		0.125	Continuing	Continuing	-
Range Test	MIPR	96th Test Wing : Eglin AFB, FL	-	1.000	May 2014	-		0.357	May 2016	-		0.357	Continuing	Continuing	-
Test Support	MIPR	Various : ,	-	0.100	May 2014	-		0.077	May 2016	-		0.077	Continuing	Continuing	-
Subtotal			-	1.375		-		0.559		-		0.559	-	-	-

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Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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/ Government Support	Various	Air National Guard Air Force Reserve Command Test Center : Tucson, AZ	-	0.020	May 2014	0.020	May 2015	0.020	May 2016	-		0.020	Continuing	Continuing	-
Subtotal			-	0.020		0.020		0.020		-		0.020	-	-	-

Remarks Performing activity dependent on test participants.															
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	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	-	1.971	7.815	0.929	-	0.929	-	-	-

Remarks									
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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force										Date: February 2015				
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604270F / <i>Electronic Warfare Development</i>					Project (Number/Name) 653891 / <i>Advanced IR Counter Measures (AIRCМ)</i>				

	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
FY15 Test Event																												
FY16 Test Event																												
First FY17 Semi-Annual Test Event																												
Second FY17 Semi-Annual Test Event																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604270F / <i>Electronic Warfare Development</i>	Project (Number/Name) 653891 / <i>Advanced IR Counter Measures (AIRCM)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FY15 Test Event	4	2015	4	2015
FY16 Test Event	2	2016	2	2016
First FY17 Semi-Annual Test Event	2	2017	2	2017
Second FY17 Semi-Annual Test Event	4	2017	4	2017