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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 1206442F I Evolved SBIRS							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	71.018	0.000	71.018	5.766	139.812	558.940	1,015.241	Continuing	Continuing
657106: EVOLVED SBIRS	-	0.000	0.000	71.018	0.000	71.018	5.766	139.812	558.940	1,015.241	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Program MDAP/MAIS Code: Project MDAP/MAIS Code(s): N42												
Note This program, BA 05 PE 1206442F, project 657106, Evolved SBIRS, is a new start.												
A. Mission Description and Budget Item Justification The Evolved Space-based Infrared System (SBIRS) RDT&E FY18 budget justification exhibits describes the SBIRS Next Generation Overhead Persistent Infrared (Next-Gen OPIR) program (pre-MDAP PNO 499) and the ground modernization effort for Evolved SBIRS. SBIRS Next-Gen OPIR: The SBIRS' primary mission is to provide initial warning of a ballistic missile attack on the US, its deployed forces, and its allies. SBIRS enhances detection and improves reporting of intercontinental ballistic missile launches, submarine launched ballistic missile launches, and tactical ballistic missile launches. The SBIRS Next-Gen OPIR will provide improved strategic missile warning coverage and increased resiliency in a strategic constellation to meet the requirements laid out in the Air Force draft Capability Development Document (CDD) based on the Air Force Space Command (AFSPC) Space Warfighter Construct (SWC) in response to the Space Enterprise Vision (SEV). The SBIRS Next Gen OPIR systems includes both space and ground elements. The Next Gen OPIR space segment will consist of Geostationary Earth Orbit (GEO) and Highly Elliptical Orbit (HEO) satellites, providing real-time persistent global infrared coverage using highly resilient bus with modernized payloads. The space segment will begin development of HEO space vehicles in FY21. The Future Operationally Resilient Ground Evolution (FORGE) and Enterprise Ground Services (EGS) are infrastructure modernization efforts to meet guidance laid out in SWC. The FORGE effort will implement an open framework for mission data processing and migration of C2 of satellite operations to integrate with EGS. FORGE and EGS efforts will provide the flexibility to integrate new mission data processing capabilities and more efficiently allow the system to meet evolving warfighter needs.												

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B. Program Change Summary (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	
Previous President's Budget		0.000	0.000	0.000	0.000	0.000	
Current President's Budget		0.000	0.000	71.018	0.000	71.018	
Total Adjustments		0.000	0.000	71.018	0.000	71.018	
• Congressional General Reductions		0.000	0.000				
• Congressional Directed Reductions		0.000	0.000				
• Congressional Rescissions		0.000	0.000				
• Congressional Adds		0.000	0.000				
• Congressional Directed Transfers		0.000	0.000				
• Reprogrammings		0.000	0.000				
• SBIR/STTR Transfer		0.000	0.000				
• Other Adjustments		0.000	0.000	71.018	0.000	71.018	
Change Summary Explanation							
This PE was established for Evolved SBIRS Ground in FY 2018. Remaining associated funding will be addressed in a future budget cycle.							
C. Accomplishments/Planned Programs (\$ in Millions)					FY 2016	FY 2017	FY 2018
Title: Evolved SBIRS					0.000	0.000	71.018
Description: The Next-Gen OPIR focuses on development of ground segment that will include EGS/FORGE in incremental development. The Space segment development consists of highly resilient HEO and GEO satellites with payload modernization. The FORGE effort will implement an open framework for mission data processing and migration of C2 of satellite operations to integrate with EGS. FORGE and EGS efforts will provide the flexibility to integrate new mission data processing capabilities and more efficiently allow the system to meet evolving warfighter needs.							
FY 2016 Accomplishments: N/A							
FY 2017 Plans: N/A							
FY 2018 Plans: Begin infrastructure modernization of Future Operationally Resilient Ground Evolution (FORGE) and Enterprise Ground Services (EGS). The FORGE effort will implement a Government owned open framework for mission data processing and migrate C2 of satellite operations onto a common platform, EGS. FORGE and EGS platforms provide enhanced flexibility and scalability which will allow for more efficient integration of new mission data processing and C2 capabilities, standardized C2 interfaces across multiple space missions, a resilient cyber defense, and a system that is prepared to meet evolving user and warfighter needs.							

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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 Program Element (Number/Name) PE 1206442F / <i>Evolved SBIRS</i>						
C. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
<p>Begin risk reduction phase and engage industry in maturing payload designs that meet new missile warning requirements, balancing affordability, capability, and resiliency requirements. The risk-reduction phase is intended to develop a PDR-level design, plan for integration onto EGS, perform ground-based demonstrations, and will reduce risk for optical resilience hardware, intrinsically-hardened Focal Plane Arrays (FPAs), multispectral and resilient processing algorithms, affordable pointing mirrors, and space processors.</p> <p>Continue program office and other related support activities that may include, but not limited to studies, technical analysis, etc.</p>												
Accomplishments/Planned Programs Subtotals										0.000	0.000	71.018
D. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• RDTE: BA05: PE 1206441F: <i>Space Based Infrared System (SBIRS) High EMD</i>	0.000	0.000	16.547	0.000	16.547	96.039	43.020	27.002	92.231	Continuing	Continuing	
Remarks												
E. Acquisition Strategy												
Utilize existing SMC contracts to transition SBIRS C2 satellite operations to EGS. Compete a mission data processing framework provider and mission data processing applications. For Next Gen OPIR space segment, the program office intends to conduct full and open competition for industry-wide participation and lowering overall program cost.												
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-3, RDT&E Project Cost Analysis: FY 2018 Air Force													Date: May 2017		
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 1206442F / <i>Evolved SBIRS</i>				Project (Number/Name) 657106 / <i>EVOLVED SBIRS</i>					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Evolved SBIRS	TBD	TBD : TBD	-	0.000		0.000		71.018	Jan 2018	0.000		71.018	Continuing	Continuing	-
Subtotal			-	0.000		0.000		71.018		0.000		71.018	-	-	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Subtotal			-	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Subtotal			-	-		-		-		-		-	-	-	-
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Subtotal			-	-		-		-		-		-	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	0.000		0.000		71.018		0.000		71.018	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Air Force										Date: May 2017			
Appropriation/Budget Activity					R-1 Program Element (Number/Name)					Project (Number/Name)			
3600 / 5					PE 1206442F / Evolved SBIRS					657106 / EVOLVED SBIRS			

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	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
SBIRS Future Ground Evolution/Development																												
SBIRS Next Gen OPIR Space Segment Acquisition																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Air Force			Date: May 2017
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 1206442F / <i>Evolved SBIRS</i>	Project (Number/Name) 657106 / <i>EVOLVED SBIRS</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
SBIRS Future Ground Evolution/Development	2	2018	4	2022
SBIRS Next Gen OPIR Space Segment Acquisition	1	2021	4	2022

Note
SBIRS Next Gen OPIR Space Segment Acquisition effort will be ongoing through Q4, FY 2033.