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**Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force** **Date:** March 2024

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 3: Advanced Technology Development (ATD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	32.338	32.510	36.445	0.000	36.445	37.374	37.429	38.795	39.607	Continuing	Continuing
633720: <i>EW Quick Reaction Capabilities</i>	-	18.627	19.552	22.125	0.000	22.125	22.696	22.741	23.571	24.064	Continuing	Continuing
63431G: <i>RF Warning &amp; Countermeasures Tech</i>	-	8.022	12.876	14.320	0.000	14.320	14.678	14.688	15.224	15.543	Continuing	Continuing
634335: <i>Cyber Concepts</i>	-	3.352	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
63691X: <i>EO/IR Warning &amp; Countermeasures Tech</i>	-	2.337	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program develops and demonstrates technologies to support Air Force electronic combat warfighting capabilities. The program focuses on developing components, subsystems, and technologies with potential aerospace, special operations, and airlift electronic combat applications. It develops and demonstrates technologies for integrating electronic combat sensors and systems into a fused and seamless whole. It integrates and focuses research efforts in electronic warfare and cyber warfare to rapidly demonstrate a capability for rapid fielding. It develops and demonstrates technologies for navigation and timing in radio frequency (RF) contested and denied environments. It develops and demonstrates advanced technologies for radio frequency electronic combat suites and advanced warning and countermeasure technologies to defeat electro-optical, infrared, and laser threats to aerospace platforms. It also develops and demonstrates technologies that will enable mission systems to be more resilient, agile, autonomous, and be able to operate in multiple domains. This program has been coordinated through the Department of Defense (DoD) Science and Technology (S&T) Executive Committee process to harmonize efforts and eliminate duplication.

This program element may include necessary expenses to support the operation and maintenance of facilities to manage, execute, and deliver science and technology capabilities.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver science & technology capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0601102F, 0602102F, 0602201F, 0602202F, 0602203F, 0602204F, 0602602F, 0602605F, 0602788F, and 0602298F.

This program is in Budget Activity 3, Advanced Technology Development because this budget activity includes development of subsystems and components and efforts to integrate subsystems and components into system prototypes for field experiments and/or tests in a simulated environment.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Air Force	<b>Date:</b> March 2024
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<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> / BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	31.037	32.510	36.372	0.000	36.372
Current President's Budget	32.338	32.510	36.445	0.000	36.445
Total Adjustments	1.301	0.000	0.073	0.000	0.073
• 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	3.100	0.000			
• SBIR/STTR Transfer	-0.557	0.000			
• Other Adjustments	-1.242	0.000	0.073	0.000	0.073

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 3600 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>				<b>Project (Number/Name)</b> 633720 / <i>EW Quick Reaction Capabilities</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
633720: <i>EW Quick Reaction Capabilities</i>	-	18.627	19.552	22.125	0.000	22.125	22.696	22.741	23.571	24.064	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project establishes a capability to rapidly assess, develop and demonstrate new electronic warfare concepts, techniques, and capabilities as well as the required position navigation and timing technologies and capabilities in the context of systemic electronic warfare effects (electronic warfare threat interactions) in a congested/contested electromagnetic spectrum, system-of-systems environment of the future. It develops disruptive electronic warfare and countermeasures concepts specifically selected for high-impact, game-changing effects; evaluates them in high fidelity virtual and hardware evaluation settings; and demonstrates them in an operationally relevant environment. It establishes and maintains an all-source, physics-based, threat-to-countermeasures electronic warfare systems engineering methodology. It develops a core analytic function, supported by simulation-based wargaming and interactive engineering modeling capabilities to evaluate advanced countermeasures concepts.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Radio Frequency Electronic Warfare	3.576	0.000	0.000
<b>Description:</b> Develop electronic warfare focused knowledge databases, engineering models, mission simulations, analysis tools and assessment environments which enable the development of multi-domain electronic warfare technologies. The primary focus is on emulating complex battlespace radio frequency environments, electronic attack effects against emerging, networked weapon systems, and assessing flexible, software-defined electronic warfare systems with non-deterministic performance (for example, utilizing cognitive algorithms).			
<b>FY 2024 Plans:</b> FY 2024 funding and technical work from this effort has been realigned to Program Electronic Combat Technology, 0603270F; Project EW Quick Reaction Capabilities, 633720; Integrated EW Demonstration effort.			
<b>FY 2025 Plans:</b> Not Applicable			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Not Applicable			
<b>Title:</b> Resilient Positioning, Navigation and Timing	10.522	11.108	11.932
<b>Description:</b> Develop and transition robust Global Navigation Satellite System capabilities; resilient complementary position, navigation and timing techniques; precise position, navigation and timing technologies for distributed sensing/effects; position,			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force		<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 3600 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>	<b>Project (Number/Name)</b> 633720 / <i>EW Quick Reaction Capabilities</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>navigation and timing technology to provide position, navigation and timing electronic warfare situational awareness and training; and position, navigation and timing architectures to enable resiliency against the rapidly evolving threat. Efforts will include prototypes and relevant Open Architecture standards where applicable to enable timely technology transition.</p> <p><b>FY 2024 Plans:</b> Continue maturation and transition of technologies for characterization of geolocation of sources interfering with navigational satellite signals. Continue developing and flight demonstrate a transcoder that converts trusted navigation sources such as modernized military Global Positioning System signals into synthesized radio frequency directly injected and useable by legacy Department of Defense Global Positioning System receivers. Continue algorithm efforts to authenticate signals as emanating directly from foreign navigation satellites. Continue developing, demonstrate, and promulgate navigational open architecture standards to permit integration of alternative/complementary position, navigation and timing approaches into future Department of Defense systems, such as the resilient embedded Global Positioning System-inertial program of record.</p> <p><b>FY 2025 Plans:</b> - Continue development of technologies to establish and maintain resilient and robust positioning, navigation, and timing capabilities for airborne platforms in environments, in particular over vast spans of water. - Continue to integrate these technologies into the reference implementations aligned with the resilient embedded global positioning system-inertial and positioning, navigation and timing software defined user equipment programs of record. - Continue developing, demonstrating, and promulgating navigational open architecture standards to permit integration of alternative position, navigation and timing approaches into future Department of Defense systems.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2025 increased compared to FY 2024 by \$0.824 million. Justification for this increase is described in plans above.</p>				
<p><b>Title:</b> Electro-Optical/Infrared Warfare Demonstrator</p> <p><b>Description:</b> Develop next generation countermeasure techniques to address the complete range of multispectral (for example, dual band infrared) threats including advanced techniques versus advanced man portable air defense system and air-to-air threats with multimode capabilities. Develop capabilities for situational awareness and countermeasure to integrated air defense systems and associated multispectral threats.</p> <p><b>FY 2024 Plans:</b> FY 2024 funding and technical work from this effort has been realigned to Program Electronic Combat Technology, 0603270F; Project EW Quick Reaction Capabilities, 633720; Integrated EW Demonstration effort.</p> <p><b>FY 2025 Plans:</b></p>		4.529	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force		<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 3600 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>	<b>Project (Number/Name)</b> 633720 / <i>EW Quick Reaction Capabilities</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Not Applicable				
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Not Applicable				
<p><b>Title:</b> Integrated EW Demonstration</p> <p><b>Description:</b> Integrate emerging technologies to develop and demonstrate electromagnetic warfare spectrum dominance concepts, technologies and techniques. Goal is to counter advanced complex electromagnetic threats in contested environments across radio frequency and electro-optic/infrared spectrums.</p> <p><b>FY 2024 Plans:</b> Continue the implementation of emerging electromagnetic attack and support capabilities into open architectures to support electromagnetic spectrum operations. Continue using agile development processes to demonstrate the capability to rapidly respond to new and unexpected complex emitters in realistic radio frequency environments. Continue expansion and maturation of modeling, simulation and laboratory assessment environments commensurate with technologies being researched, developed and tested including cognitive and autonomous electronic warfare technologies for multi-spectral treats in a complex electromagnetic environment. Continue iterating and refreshing techniques for data collection capabilities to enhance research and development efforts. Continue analysis from field test to develop requirements for proactive detection and situation awareness for multiple Department of the Air Force platforms.</p> <p><b>FY 2025 Plans:</b> - Continue the implementation of emerging electromagnetic attack and support capabilities based on operational objectives and analysis of field test results. - Continue using agile development processes to enhance the capability to rapidly respond to new and unexpected complex emitters in greater volume and in less time. - Continue expansion and maturation of modeling, simulation and laboratory capabilities for the assessment of cognitive and autonomous electronic warfare technologies for multi-spectral treats in a complex electromagnetic environment. - Continue iterating and refreshing techniques for data collection capabilities and operational test events to enhance research and development efforts. - Continue analysis from field tests to meet operational requirements for proactive detection and situation awareness for multiple Department of the Air Force platforms.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b></p>		0.000	8.444	10.193

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>	<b>Project (Number/Name)</b> 633720 / <i>EW Quick Reaction Capabilities</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
FY 2025 increased compared to FY 2024 by \$1.749 million. Increase is a result of increased emphasis in the expansion and maturation of modeling and simulation capabilities for cognitive and autonomous technologies.			
<b>Accomplishments/Planned Programs Subtotals</b>	18.627	19.552	22.125

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

Not applicable

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 3600 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>				<b>Project (Number/Name)</b> 63431G / <i>RF Warning &amp; Countermeasures Tech</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
63431G: <i>RF Warning &amp; Countermeasures Tech</i>	-	8.022	12.876	14.320	0.000	14.320	14.678	14.688	15.224	15.543	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project develops and demonstrates advanced technologies for radio frequency electronic combat suites, including the required navigation technologies and capabilities, to enhance the survivability of aerospace vehicles and to provide crew situational awareness. The research addresses technologies for missile/threat warning, radio frequency receivers, electronic combat pre-processors, advanced sorting/pre-processing algorithms, and expert software for applications on existing and future electronic combat systems. The research also focuses on the development and demonstration of subsystems and components for generating on-board/off-board radio frequency countermeasure techniques to address the complete range of multispectral threats with multimode capabilities. Develops capabilities for situational awareness and countermeasures to integrated air defense systems and associated multispectral threats. Develops electromagnetic warfare focused knowledge databases, engineering models, mission simulations, analysis tools and assessment environments which enable the development of multi-domain multi-spectral electromagnetic warfare technologies. This includes the development of electronic countermeasures techniques, as well as advanced electronic countermeasures technologies such as antennas, power amplifiers, and preamplifiers. This project also aims to develop cyber resilience and protect systems through adaptation of the system to the threat. It demonstrates these technologies in open and adaptable architectures for system integration in field demonstrations and proves out the technologies through rapid integration of sensors and architectures for technology transition.

In FY 2024 and FY 2025, in order to better execute these converging efforts in the Multi-Spectral domain, funding and technical work was transferred into this BPAC from "Program 0603270F Electronic Combat Technology, Project 634335: Cyber Concepts, effort Resilient and Agile Mission Systems Architecture" and "Program 0603270F Electronic Combat Technology, Project 63691X: EO/IR Warning & Countermeasures Tech, effort Advanced Electro-Optical/Infrared Warning and Countermeasure Technologies"

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Spectrum Dominance Technology Demonstrations	8.022	12.876	14.320
<b>Description:</b> Develop aerospace platform jamming concepts, technologies and techniques to counter advanced radio frequency threats associated with current and future aerospace weapon systems. Provide position, navigation and system resilience via open architecture solutions.			
Note: In FY 2023 and prior this Thrust was titled "Radio Frequency Electronic Warfare Demonstrator" This change was made to accommodate the transfer of funding and technical work to this Effort from "Program 0603270F Electronic Combat Technology, Project 634335: Cyber Concepts, effort Resilient and Agile Mission Systems Architecture" and "Program 0603270F Electronic Combat Technology, Project 63691X: EO/IR Warning & Countermeasures Tech, effort Advanced			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>	<b>Project (Number/Name)</b> 63431G / <i>RF Warning &amp; Countermeasures Tech</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>Electro-Optical/Infrared Warning and Countermeasure Technologies" in order to better execute these converging efforts in the Multi-Spectral domain.</p> <p><b><i>FY 2024 Plans:</i></b>                      Complete the Radio Frequency Electronic Warfare Demonstrator effort and deliver a software-centric cognitive electromagnetic warfare-based rapid reprogramming system to the 350th Spectrum Warfare Wing to improve next sortie reprogramming capability against complex emitters. These deliverables include cognitive electromagnetic warfare applications integrated into an on-station system to support electromagnetic spectrum maneuverability and data analytics and visualization tools to assess system performance for reprogramming.                      Continue expansion and maturation of modeling, simulation and laboratory assessment environments commensurate with technologies being researched, developed and tested including cognitive and autonomous electronic warfare technologies for multi-spectral treats in a complex electromagnetic environment. Continue the implementation and development of spectrum warfare's integration into Reference Architecture Implementations and open architectures standards to support modeling and simulation analysis. Continue conducting technology demonstrations to support transition into Air Force platforms and electromagnetic spectrum operations units. Continue maturing the process for threat characterization and countermeasures development and field testing of new advanced threats to include laser jam codes and techniques. Continue effectiveness assessment of laser and missile warning technologies and techniques for a variety of Air Force platforms. Continue development of advanced networking, processing, advanced computing paradigms, and cybersecurity technologies for next-generation avionics mission system capabilities. Continue utilizing agile development processes and digital engineering techniques for rapid and affordable development, integration, and demonstrations to rapidly respond to new and unexpected complex emitters in realistic radio frequency environments.</p> <p><b><i>FY 2025 Plans:</i></b>                      - Initiate effort to develop and assess multi-spectral electromagnetic support and attack concepts and technologies against emerging threats, from feedback of completed Radio Frequency Electronic Warfare Demonstrator effort.                      - Continue assessing operational and program office requirements to determine multi-spectral shortfalls and determine applicable modeling &amp; simulation to evaluate shortfalls and potential technologies to address these shortfalls.                      - Continue expansion and maturation of modeling, simulation and laboratory assessment environments commensurate with technologies being researched, developed, and tested; including cognitive and autonomous electronic warfare technologies for multi-spectral treats in a complex electromagnetic environment.                      - Continue multi-spectral development within Reference Architecture Implementations and open architectures standards to support enhanced modeling, simulation and assessment.                      - Continue conducting technology demonstrations to support transition into Air Force platforms and electromagnetic spectrum operations units.</p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>	<b>Project (Number/Name)</b> 63431G / <i>RF Warning &amp; Countermeasures Tech</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<ul style="list-style-type: none"> <li>- Continue threat characterization, countermeasures development, and field testing of new advanced threats; new advanced threats to include laser jam codes and techniques.</li> <li>- Continue effectiveness assessment of laser and missile warning technologies and techniques for a variety of Air Force platforms.</li> <li>- Continue development of advanced networking, processing, advanced computing paradigms, and cybersecurity technologies for next-generation avionics mission system capabilities.</li> <li>- Continue utilizing agile development processes and digital engineering techniques to further accelerate development, integration, and demonstrations to rapidly respond to new and unexpected complex emitters in realistic radio frequency environments.</li> </ul> <p><b><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i></b>  FY 2025 increase compared to FY 2024 by \$1.444 million. Funding increased due to increased emphasis in multi-spectral electromagnetic support and attack concepts and technologies. Funding increase also due to realignment of technical scope to this effort from 0603270F Electronic Combat Technology, Project 634335: Cyber Concepts, effort Resilient and Agile Mission Systems Architecture.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	8.022	12.876	14.320

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

Not applicable

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**Exhibit R-2A, RDT&E Project Justification:** PB 2025 Air Force **Date:** March 2024

<b>Appropriation/Budget Activity</b> 3600 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>	<b>Project (Number/Name)</b> 634335 / <i>Cyber Concepts</i>
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
634335: <i>Cyber Concepts</i>	-	3.352	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project develops and demonstrates methods to discover cyber susceptibilities, assess avionics systems, formulate mitigation strategies, and investigate use of tools and technologies to automate this process. It is designed to apply developed vulnerability discovery, vulnerability mitigation, and cyber protection technology to avionics systems and components and embedded systems. This involves technologies for trusted sensors and trusted systems that deter exploitation of our critical hardware and software. This project aims to develop cyber resilience and protect systems through adaptation of the system to the threat. It demonstrates these technologies in open and adaptable architectures for system integration in field demonstrations and proves out the technologies through rapid integration of sensors and architectures for technology transition. It integrates research efforts in electronic and cyber warfare to rapidly demonstrate a capability for rapid fielding.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	FY 2023	FY 2024	FY 2025
<b>Title:</b> Resilient and Agile Mission Systems Architecture	3.352	0.043	0.000
<b>Description:</b> This effort performs advanced development and demonstration of methods, technologies, and tools to enable resilience and protect mission systems against threats. This involves open and adaptable architectures for rapid integration and agile systems, cyber protections and resilience technologies to protect against threats. It integrates research efforts in electronic and cyber warfare to demonstrate novel operational capabilities through laboratory, field, and flight tests and experimentation. The goal is to reduce risk for rapid transition of novel operational capabilities into Department of the Air Force mission systems.			
<b>FY 2024 Plans:</b> Continue transfer of technical work while it realigns under Program 0603270F Electronic Combat Technology, Project 63431G: RF Warning & Countermeasures Tech, effort Spectrum Dominance Technology Demonstrations.			
<b>FY 2025 Plans:</b> Not Applicable			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2025 decreased compared to FY 2024 by \$0.043 million. Funding decreased due to realignment of this effort to Program 0603270F Electronic Combat Technology, Project 63431G: RF Warning & Countermeasures Tech, effort Spectrum Dominance Technology Demonstrations.			
<b>Accomplishments/Planned Programs Subtotals</b>	3.352	0.043	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 3	R-1 Program Element (Number/Name) PE 0603270F / <i>Electronic Combat Technology</i>	Project (Number/Name) 634335 / <i>Cyber Concepts</i>

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

Not applicable

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 3600 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>				<b>Project (Number/Name)</b> 63691X / <i>EO/IR Warning &amp; Countermeasures Tech</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
63691X: <i>EO/IR Warning &amp; Countermeasures Tech</i>	-	2.337	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project develops and demonstrates the advanced warning and countermeasure technologies required to negate electro-optical/infrared and laser threats to aerospace platforms. Develops off-board (decoys and expendables) and on-board countermeasure technologies for aircraft self-protection to provide robust, affordable solutions for protection against infrared missiles with autonomous seekers, multi-spectral threats, laser-guided weapons, and electro-optical/infrared tracking systems used to direct electro-optical/infrared and radar-guided missiles.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Advanced Electro-Optical/Infrared Warning and Countermeasure Technologies	2.337	0.039	0.000
<b>Description:</b> Analyze the vulnerabilities of current infrared missile systems and future imaging infrared sensors. Develop advanced countermeasure system techniques to exploit vulnerabilities for use against infrared and electro-optical guided missile threats. Develop advanced optical and infrared sensor systems for airborne and space situational awareness and threat warning.			
<b>FY 2024 Plans:</b> Continue transfer of technical work while it realigns under Program 0603270F Electronic Combat Technology, Project 63431G: RF Warning & Countermeasures Tech, effort Spectrum Dominance Technology Demonstrations.			
<b>FY 2025 Plans:</b> Not Applicable			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2025 decreased compared to FY 2024 by \$0.039 million. Funding decreased due to realignment of this effort to Program 0603270F Electronic Combat Technology, Project 63431G: RF Warning & Countermeasures Tech, effort Spectrum Dominance Technology Demonstrations.			
<b>Accomplishments/Planned Programs Subtotals</b>	2.337	0.039	0.000

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603270F / <i>Electronic Combat Technology</i>	<b>Project (Number/Name)</b> 63691X / <i>EO/IR Warning &amp; Countermeasures Tech</i>

**D. Acquisition Strategy**  
Not applicable