

UNCLASSIFIED

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

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| Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 2: Applied Research</i> | R-1 Program Element (Number/Name) PE 0602114N / <i>Power Proj Applied Research</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 | 0.000 | 30.530 | 23.982 | 23.842 | - | 23.842 | 24.322 | 24.808 | 25.303 | 25.835 | Continuing | Continuing |
| 0000: <i>Power Proj Applied Research</i> | 0.000 | 25.703 | 23.982 | 23.842 | - | 23.842 | 24.322 | 24.808 | 25.303 | 25.835 | Continuing | Continuing |
| 9999: <i>Congressional Adds</i> | 0.000 | 4.827 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 4.827 |

A. Mission Description and Budget Item Justification

In an Artificial Intelligence (AI) enabled maritime battlespace, the ability to fight at the speed of light will determine the outcome. The effective defense against threats increasingly beyond human speed, will enable U.S. naval forces to outthink, outmaneuver and outfight adversaries. This Program Element (PE) supports both advanced technology research and near to mid-term transition opportunities. The advanced research focus is primarily on directed energy, high speed weapon propulsion, Electro-Optic/Infrared (EO/IR) sensor technologies, and Naval Precision Strike Operations. The goal of this research is to develop technologies and capabilities that enable Directed Energy (DE) weapons as well as defense against adversary DE systems; the development of vehicle and propulsion technology for high-speed weapons operating from Mach 3 to Mach 8 and beyond; investment in the areas of Electro Optic/Infrared devices and advanced sensors; and technologies that provide the navy of the future the ability to quickly locate, target, and strike critical targets ashore.

Today's Sailors and Marines are enabled by naval Science and Technology (S&T). Since 1946, the Office of Naval Research (ONR) has fostered scientific research related to the maintenance of maritime superiority and national defense. ONR manages the Department of the Navy's (DON) portfolio of naval Basic and Applied research, and Advanced Technology Development investments to ensure naval forces can effectively deter conflict, but when called upon, fight, win and come home safe. Current investments hedge against uncertainty, providing solutions to commanders today, and options for the future. The Naval S&T budget supports higher guidance defined by the National Defense Strategy, and responds to requirements identified by the Secretary of the Navy through research priorities set by the Chief of Naval Research, coordinated across the Naval Research Enterprise (NRE), and outlined in the Naval R&D Framework.

This Program Element (PE) funds Applied Research, which is the systematic study to understand the means to meet a recognized and specific need. Most of the work in this PE can be classified between Technology Readiness Level (TRL) 2 (technology concept and/or application formulation) and TRL 4 (component and/or breadboard validation in laboratory environments).

Due to the number of efforts in this PE, the programs described herein are representative of the work included in this PE.

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| B. Program Change Summary (\$ in Millions) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 27.953 | 23.982 | 23.880 | - | 23.880 |
| Current President's Budget | 30.530 | 23.982 | 23.842 | - | 23.842 |
| Total Adjustments | 2.577 | 0.000 | -0.038 | - | -0.038 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | 3.000 | 0.000 | | | |
| • SBIR/STTR Transfer | -0.423 | 0.000 | | | |
| • Program Adjustments | 0.000 | 0.000 | -0.038 | - | -0.038 |
| • Rate/Misc Adjustments | 0.000 | 0.000 | 0.000 | - | 0.000 |

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

Project: 9999: *Congressional Adds*

Congressional Add: *Meta material broadband coatings*

| | FY 2023 | FY 2024 |
|---|----------------|----------------|
| Congressional Add Subtotals for Project: 9999 | 4.827 | 0.000 |
| Congressional Add Totals for all Projects | 4.827 | 0.000 |

Change Summary Explanation

Funding: No significant change.

Technical: No significant change.

Schedule: No significant change

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| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | | | | | | | | | Date: March 2024 | | |
| Appropriation/Budget Activity 1319 / 2 | | | | | R-1 Program Element (Number/Name) PE 0602114N / Power Proj Applied Research | | | | Project (Number/Name) 0000 / Power Proj Applied Research | | | |
| 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 |
| 0000: Power Proj Applied Research | 0.000 | 25.703 | 23.982 | 23.842 | - | 23.842 | 24.322 | 24.808 | 25.303 | 25.835 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

In an Artificial Intelligence (AI) enabled maritime battlespace, the ability to fight at the speed of light will determine the outcome. The effective defense against threats increasingly beyond human speed, will enable U.S. naval forces to outthink, outmaneuver and outfight adversaries. This Project supports both advanced technology research and near to mid-term transition opportunities. The advanced research focus is primarily on directed energy, high speed weapon propulsion, electro-optic/infrared (EO/IR) sensor technologies, and Naval Precision Strike Operations. The goal of this research is to develop technologies and capabilities that enable Directed Energy (DE) weapons as well as defense against adversary DE systems; the development of vehicle and propulsion technology for high-speed weapons operating from Mach 3 to Mach 8 and beyond; investment in the areas of Electro Optic/Infrared devices and advanced sensors; and technologies that provide the navy of the future the ability to quickly locate, target, and strike critical targets ashore.

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

Title: Directed Energy

Description: The goal of this activity is to develop technologies and capabilities that enable Directed Energy (DE) weapons for naval applications as well as defense against adversary DE systems. The advanced research focus is in Naval Ship Defense, Naval Air Defense, and Naval Precision Strike Operations. The scope of this activity includes systems, sub-systems and their associated technologies. These technologies provide naval forces the ability to quickly engage critical and emerging targets, in cost effective means, while minimizing potential collateral damage, as well as the ability to defend against and counter adversarial modes of attack.

FY 2024 Plans:

Conduct exploratory research and develop component technologies that enables more capable and more lethal High Energy Laser (HEL), High Power Microwave (HPM) and Ultra Short Pulse Laser (USPL) weapons technologies aligned to warfighter requirements and capabilities to counter adversary DE weapons through Counter Directed Energy Weapons (CDEW).

Continuing Efforts

- Development of novel laser and beam-director architectures
- Improved sensor and illuminator technologies
- Reduced system jitter and improved precision aim-point maintenance
- Improved characterization of atmosphere and associated modeling tools

| FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|----------------|----------------|---------------------|--------------------|----------------------|
| 7.039 | 6.191 | 5.908 | 0.000 | 5.908 |

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| Appropriation/Budget Activity 1319 / 2 | R-1 Program Element (Number/Name) PE 0602114N / <i>Power Proj Applied Research</i> h | Project (Number/Name) 0000 / <i>Power Proj Applied Research</i> |

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

| | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---------|---------|-----------------|----------------|------------------|
| <ul style="list-style-type: none"> - Improved understanding of blooming and laser/material/target interactions - Development of novel laser sources in Mid Wave Infrared (MWIR) and Long Wave Infrared (LWIR) - Improved understanding of USPL propagation mechanisms and effects - Development of understanding of HPM use in Electromagnetic (EM) Maneuver Warfare and Integrated Defense of US naval forces - Improved understanding of HPM effects and lethality through RF coupling, device interaction physics and component level effects - Engineering USPL sub-component maturation for prototype sub systems - USPL component integration for prototype system of systems (SOS) experimentation - The effort for novel Counter-HEL capability - Range testing of HPM engagement systems - Performing system level performance analysis and mission level modeling relative to threats. - Applied research to further the State-of-the-Art Advancement for HPM capable low profile steerable antennas; high energy density capacitors, solid-state high voltage switches; high voltage power supplies, power electronics switches, and hardened controls to support prototype development. - Explore HPM source and related component development around open architecture principles, to explore hardware options for achieving effective system CONEMPS - Developing self-contained HPM prototype development with integrated sensor and C2 capabilities that will provide a response to UAS swarm attack in both ground and air platform applications -Applied research in Solid-state and vacuum electronic based HPM sources capable of flexible waveforms for cross EM spectrum applications - Effort to develop and apply innovative S&T in plasmas, pulsed power, electromagnetic acceleration, particle beams, high-energy & ultra-short-pulse lasers (USPL), and non-linear optics to support current and future Navy and DoD needs. <p>Completing Efforts</p> <ul style="list-style-type: none"> - Improved laser sources with enhanced spectrum control - Improved HEL electrical-to-optical efficiency - Development of Counter-capabilities, including the understanding of HEL Weapons risks to US naval forces <p>Initiating Efforts</p> <ul style="list-style-type: none"> - Enhancement of HEL efficiency based on improved diode & fiber laser technologies - Improvements in fiber laser doped illuminating lasers at unique "eye-safer" wavelengths | | | | | |

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| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|--|----------------|----------------|-------------------------|------------------------|--------------------------|
| <ul style="list-style-type: none"> - Improvements in laser light detection and testing sensors - Requirement's analysis to relate USPL functional requirements to operational needs - Functional analysis and design in order to identify USPL performance issues - Building and test of prototypes of USPL critical components - Validation of the maturity of USPL critical components - Conduct USPL precision dynamic engagements, against multiple maneuvering targets, with various effects (hard kill, sensing, non-lethal) - Explore the use of Artificial Intelligence for HEL & HPM systems to increase lethality in complex maritime operational environments - Applied research in HPM capable wide-bandwidth high-power frequency agile amplifiers - Initiate efforts into hollow core multiband fibers for laser power transmission. <p><i>FY 2025 Base Plans:</i> Conduct exploratory research and develop component technologies that enables more capable and more lethal High Energy Laser (HEL), High Power Microwave (HPM) and Ultra Short Pulse Laser (USPL) weapons technologies aligned to warfighter requirements and capabilities to counter adversary DE weapons through Counter Directed Energy Weapons (CDEW).</p> <p>Directed Energy and Counter-Directed Energy</p> <p>Continue:</p> <ul style="list-style-type: none"> -Enhancement of HEL efficiency based on improved diode & fiber laser technologies -Improvements in fiber laser doped illuminating lasers at unique "eye-safer" wavelengths -Improvements in laser light detection and testing sensors -Improved sensor and illuminator technologies -Improved understanding of blooming and laser/material/target interactions -Development of novel laser sources in Mid Wave Infrared (MWIR) and Long Wave Infrared (LWIR) -Development of novel laser and beam-director architectures -Efforts for novel Counter-HEL capability <p>Complete:</p> <ul style="list-style-type: none"> -Reduced system jitter and improved precision aim-point maintenance | | | | | |

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

| | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|--|---------|---------|--------------|-------------|---------------|
| <p>-Use of Artificial Intelligence and Machine Learning for HEL & HPM systems toward increasing lethality (transition to prototypes)</p> <p>Initiate</p> <ul style="list-style-type: none"> -Improvements in laser-hardening using novel materials for manned air platforms -New concepts and metamaterial research for Counter Directed Energy Weapons <p>Ultra Short Pulse Laser (USPL)</p> <p>Continue:</p> <ul style="list-style-type: none"> -Improved understanding of USPL propagation mechanisms and effects -Engineering USPL sub-component maturation for prototype sub systems -USPL component integration for prototype system of systems (SOS) experimentation -Requirement's analysis to relate USPL functional requirements to operational needs -Functional analysis and design in order to identify USPL performance issues -Building and test of prototypes of USPL critical components -Validation of the maturity of USPL critical components -Conduct USPL precision dynamic engagements, against multiple maneuvering targets, with various effects (hard kill, sensing, non-lethal) <p>High Power Microwave (HPM)</p> <p>Initiate</p> <ul style="list-style-type: none"> -Research in Novel HPM sensors including electronic battle damage indication (eBDI) instrumentation. <p>Continue:</p> <ul style="list-style-type: none"> -Explore the use of Artificial Intelligence for HEL & HPM systems to increase lethality in complex maritime operational environments -Development of understanding of HPM use in Electromagnetic (EM) Maneuver Warfare and Integrated Defense of US naval forces | | | | | |

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| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|--|----------------|----------------|-------------------------|------------------------|--------------------------|
| <p>-Improved understanding of HPM effects and lethality through RF coupling, device interaction physics and component level effects by implementation of time-reversal techniques for generating optimized, real-time threat agnostic defeat waveforms.</p> <p>-Range testing of HPM engagement systems</p> <p>-Performing system level performance analysis and mission level modeling relative to threats.</p> <p>-Applied research to further the State-of-the-Art Advancement for HPM capable low profile steerable antennas; high energy density capacitors, solid-state high voltage switches; high voltage power supplies, power electronics switches, and hardened controls to support prototype development.</p> <p>-Applied research in HPM capable wide-bandwidth high-power frequency agile amplifiers</p> <p>-Explore HPM source and related component development around open architecture principles, to explore hardware options for achieving effective system CONEMPS</p> <p>-Developing self-contained HPM prototype development with integrated sensor and C2 capabilities that will provide a response to UAS swarm attack in both ground and air platform applications</p> <p>-Applied research in Solid-state and vacuum electronic based HPM sources capable of flexible waveforms for cross EM spectrum applications</p> <p>-Initiate/continue efforts applied science efforts into Electric Weapons Technology. The thrust of this will be to enable the near to mid-term deployment of electric weapons, which include but are not limited to high-power lasers, microwaves, and other directed energy systems, and electromagnetic launchers. This area requires a broad scope of research in areas such as fabrication of optical fibers, laser media, optical coatings, and ultrafast bandgap photonic materials; beam control systems for atmospheric and underwater propagation of high-power electromagnetic radiation; high-power microwave sources and antenna design; characterization of high-intensity laser and microwave damage mechanisms and effects on systems; increasing the efficiency and lifetime of pulsed power systems and electromagnetic launchers; decreasing the size, weight, and power (SWaP), and increasing robustness and automation of electric weapons systems. (NRL)</p> <p>-Complete efforts into hollow core multiband fibers for laser power transmission. (NRL)</p> <p>-Complete effort to develop and apply innovative S&T in plasmas, pulsed power, electromagnetic acceleration, particle beams, high-energy & ultra-short-pulse lasers (USPL), and non-linear optics to support current and future Navy and DoD needs. (NRL)</p> <p><i>FY 2025 OCO Plans:</i></p> | | | | | |

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| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|----------------|----------------|-------------------------|------------------------|--------------------------|
| N/A | | | | | |
| <i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> There is no significant change in funding from FY24 to FY25. | | | | | |
| <i>Title:</i> High Speed Propulsion and Advanced Weapon Technologies <i>Description:</i> This activity is focused on applied research to support the development of vehicle and propulsion technology for high-speed weapons operating from Mach 3 to Mach 8 and beyond. The goal is to develop computational, experimental and flight testing capabilities along with the workforce needed to support the development of hypersonic weapons. Research includes: Objectives: - Prediction and control of hypersonic boundary-layers and shock-wave boundary-layer interactions - Development of hypersonic ground test facilities, instrumentation and nonintrusive diagnostics - Prediction of interactions between materials and the high-speed flight environment such as flight through weather and oxidation of thermal protection systems - Development of improved modeling tools to predict the aerothermal and aerodynamic performance of hypersonic weapons over a wide range of velocities and altitudes - Development of ultra-high temperature materials, cooling strategies and thermal protection systems that can survive the launch and flight environment - Development high-speed propulsion technologies such as solid fuel ramjets <i>FY 2024 Plans:</i> Conduct applied research for high-speed propulsion technologies such as solid-fuel ramjets/scramjets and dual mode ramjet/scramjet (DMRJ) to extend the range of hypersonic missiles; external aerodynamic technologies such as laminar flow control to enable high-performance hypersonic missiles; improved modeling tools to predict the aerothermal, aerodynamic and propulsion performance of hypersonic weapons over a wide range of velocities and altitudes; ultra-high temperature metamaterials and structures to enable sensing, flow control, power generation, and improved aero-thermo-mechanical performance of aeroshells and high-speed propulsion systems. Continuing Efforts - Experimental and numerical investigation on the combustion characteristics of solid fuels in supersonic combustors | 16.623 | 15.000 | 15.271 | 0.000 | 15.271 |

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

| | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|--|---------|---------|-----------------|----------------|------------------|
| <ul style="list-style-type: none"> - Development of physics based computational structural analysis tools for prediction of impact damage in weapon structures due to atmospheric encounters under high-speed flow conditions - Development and testing of new aeroshell material technology to extend laminar flow - High-fidelity computations, ground test techniques and flow diagnostics to characterize neutral and ionized gas species - Experimental and computational studies to extend the flight envelope of solid fuel ramjets to higher speeds and altitudes and to improve throttle-ability - Applied research for Nuclear Aircraft Carrier (CVN) compliant hypersonic air-breathing weapons to increase performance & operability - Development of reduced orders models for rapid prediction of aerothermal and aerodynamic performance using data driven approaches such as machine learning, high-fidelity simulations and experiments as training data <p>Initiating Efforts</p> <ul style="list-style-type: none"> - Development and characterization of ultra-high temperature metamaterials and structures to enable, sensing, flow control, power generation, and improved aero-thermo-mechanical performance of aeroshells and high-speed propulsion systems - Development of efficient, predictive computational tools for high-speed, air-breathing propulsion systems to enable robust digital-engineering methodologies <p>FY 2025 Base Plans: Conduct applied research for high-speed propulsion technologies such as solid-fuel ramjets/scramjets and dual mode ramjet/scramjet (DMRJ) to extend the range of hypersonic missiles; external aerodynamic technologies such as laminar flow control to enable high-performance hypersonic missiles; improved modeling tools to predict the aerothermal, aerodynamic and propulsion performance of hypersonic weapons over a wide range of velocities and altitudes; ultra-high temperature metamaterials and structures to enable sensing, flow control, power generation, and improved aero-thermo-mechanical performance of aeroshells and high-speed propulsion systems.</p> <p>Continuing:</p> <ul style="list-style-type: none"> - Development and characterization of ultra-high temperature metamaterials and structures to enable, sensing, flow control, power generation, and improved aero-thermo-mechanical performance of aeroshells and high-speed propulsion systems. | | | | | |

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| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|--|----------------|----------------|---------------------|--------------------|----------------------|
| <ul style="list-style-type: none"> - Development of efficient, predictive computational tools for high-speed, air-breathing propulsion systems to enable robust digital-engineering methodologies. - Experimental and numerical investigation on the combustion characteristics of solid fuels in supersonic combustors. - Development of physics based computational structural analysis tools for prediction of impact damage in weapon structures due to atmospheric encounters under high-speed flow conditions. - Development and testing of new aeroshell material technology to extend laminar flow. - High-fidelity computations, ground test techniques and flow diagnostics to characterize neutral and ionized gas species. - Experimental and computational studies to extend the flight envelope of solid fuel ramjets to higher speeds and altitudes and to improve throttle-ability. - Applied research for Nuclear Aircraft Carrier (CVN) compliant hypersonic air-breathing weapons to increase performance & operability. - Development of reduced orders models for rapid prediction of aerothermal and aerodynamic performance using data driven approaches such as machine learning, high-fidelity simulations and experiments as training data <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: There is no significant change in funding from FY24 to FY25.</p> | | | | | |
| <p>Title: Navigation, Electro Optic/Infrared (EO/IR), and Sensor Technologies</p> <p>Description: This activity describes Navy Science and Technology investments in the areas of Electro Optic/Infrared (EO/IR) devices and advanced sensors and includes investment/performance in the technology areas of EO/IR, Electronic Warfare (EW), Electromagnetic Warfare, and Communications.</p> <p>FY 2024 Plans: Continuing Efforts - Continue to research and develop technologies that will protect surface platforms against imaging infrared seekers.</p> | 0.605 | 2.107 | 2.663 | 0.000 | 2.663 |

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

| | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|--|---------|---------|-----------------|----------------|------------------|
| <p>- Continue efforts into development of inexpensive photodetectors operating at room temperature with higher detectivity than state-of-the-art cooled detectors.</p> <p>FY 2025 Base Plans: -Initiate/continue efforts into Imaging IR Countermeasures. The technical objective of this task area is to research and develop state-of-the-art technologies that will be used to support the protection of naval platforms against imaging infrared (IIR) seekers. Research will be conducted across a broad area of Optic/Infrared (EO/IR) technologies including artificial intelligence (AI) processing, counter-AI processing obscurants, modeling and advanced simulation tools, adaptive optics and supporting technologies. This area develops innovative EO/IR sensing and countermeasure paradigms, to insure full EO/IR spectrum superiority. These technologies address near and emerging far term threats. (NRL) -Complete efforts to research and develop technologies that will protect surface platforms against imaging infrared seekers. (NRL) -Complete efforts into development of inexpensive photodetectors operating at room temperature with higher detectivity than state-of-the-art cooled detectors . (NRL)</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: There is no significant change in funding from FY24 to FY25.</p> | | | | | |
| <p>Title: Strike and Littoral Combat Technologies</p> <p>Description: The focus of this activity is on those technologies that will support Naval Precision Strike Operations and provide the Navy of the future the ability to quickly locate, target, and strike critical targets ashore.</p> <p>FY 2024 Plans: Continuing Efforts - Continue projects that aim to develop technology and techniques to provide the Navy of the future the ability to quickly locate, target, and strike critical targets ashore.</p> <p>Completing Efforts</p> | 1.436 | 0.684 | 0.000 | 0.000 | 0.000 |

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| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|----------------|----------------|-------------------------|------------------------|--------------------------|
| - Complete efforts for machine-learning-based resource management for distributed radar system operation. | | | | | |
| <i>FY 2025 Base Plans:</i> N/A | | | | | |
| <i>FY 2025 OCO Plans:</i> N/A | | | | | |
| <i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> Funding decrease is due to the completion of projects that aim to develop technology and techniques to provide the Navy of the future the ability to quickly locate, target, and strike critical targets ashore. (NRL) | | | | | |
| Accomplishments/Planned Programs Subtotals | 25.703 | 23.982 | 23.842 | 0.000 | 23.842 |

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

N/A

Remarks

D. Acquisition Strategy

N/A

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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 |
|--------------------------|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| 9999: Congressional Adds | 0.000 | 4.827 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 4.827 |

A. Mission Description and Budget Item Justification

Congressional Interest Items not included in other Projects.

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

| | FY 2023 | FY 2024 |
|---|---------|---------|
| <i>Congressional Add:</i> Meta material broadband coatings | 4.827 | 0.000 |
| <i>FY 2023 Accomplishments:</i> Conduct research in Meta material broadband coatings | | |
| <i>FY 2024 Plans:</i> N/A | | |
| Congressional Adds Subtotals | 4.827 | 0.000 |

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

N/A

Remarks

D. Acquisition Strategy

N/A