Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force											Date: April 2022	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 1: *Basic Research*					R-1 Program Element (Number/Name) PE 0601108F / *High Energy Laser Research Initiatives*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	14.454	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
615097: *Joint Directed Energy Basic Research*	-	14.454	0.000	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 funded basic research aimed at developing fundamental scientific knowledge to support future Department of Defense Directed Energy Weapon systems through the Joint Directed Energy Transition Office. This program funded multi-disciplinary research institutes to conduct research on laser, laser beam control and high power microwave technologies. In addition, this program supported educational grants to stimulate student interest in directed energy and encourage graduate research in topics related to high energy lasers and high power microwaves. These educational grants were used for educational tools, scholarships, and summer intern employees in military laboratories. Efforts in this program were coordinated through the Department of Defense Science and Technology Executive Committee process to harmonize efforts and eliminate duplication.

For FY 2022 this effort moved to OSD PE 601108D8Z.

This program is in Budget Activity 1, Basic Research because this budget activity includes scientific study and experimentation directed toward increasing fundamental knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	15.057	0.000	0.000	0.000	0.000
Current President's Budget	14.454	0.000	0.000	0.000	0.000
Total Adjustments	-0.603	0.000	0.000	0.000	0.000
• 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	-0.603	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

Change Summary Explanation

NA

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Directed Energy Sources and Devices ***Description:*** Improve the fundamental understanding and modeling of high energy laser and high power microwave sources and devices. ***FY 2022 Plans:*** FY 2022 effort is moving to OSD PE 601108D8Z. ***FY 2023 Plans:*** Not Applicable ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Not Applicable	6.307	0.000	0.000
Title: Directed Energy Propagation Technologies ***Description:*** Improve the fundamental understanding and modeling of beam control technologies as they relate to high energy laser applications and high power microwaves. Conduct research in atmospheric characterization, metrology, control systems, algorithms, waveguides, antennas and beam control component technology. ***FY 2022 Plans:*** FY 2022 effort is moving to OSD PE 601108D8Z. ***FY 2023 Plans:*** Not Applicable ***FY 2022 to FY 2023 Increase/Decrease Statement:*** There is no increase or decrease. This is zeroed out.	6.897	0.000	0.000
Title: Directed Energy Education ***Description:*** Fund educational grants to stimulate student interest in directed energy. ***FY 2022 Plans:*** FY 2022 effort is moving to OSD PE 601108D8Z. ***FY 2023 Plans:*** Not Applicable ***FY 2022 to FY 2023 Increase/Decrease Statement:***	1.250	0.000	0.000

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Not Applicable			
Accomplishments/Planned Programs Subtotals	14.454	0.000	0.000

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

Not Applicable