

# UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 3: Advanced Technology Development (ATD)					R-1 Program Element (Number/Name) PE 0603444F I Maui Space Surveillance System (MSSS)							
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	-	25.535	14.031	12.853	-	12.853	11.681	11.681	11.912	12.147	Continuing	Continuing
634868: Maui Space Surveillance System	-	25.535	14.031	12.853	-	12.853	11.681	11.681	11.912	12.147	Continuing	Continuing
A. Mission Description and Budget Item Justification												
This program funds ground-based optical space situational awareness (SSA) technology development and demonstration at the Maui Space Surveillance System (MSSS) in Hawaii, as well as the operation and upgrade of the facility. Efforts in this program have been coordinated through the Department of Defense (DoD) Science and Technology (S&T) Executive Committee process to harmonize efforts and eliminate duplication.												
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.												
B. Program Change Summary (\$ in Millions)				FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total				
Previous President's Budget				26.299	14.031	12.938	-	12.938				
Current President's Budget				25.535	14.031	12.853	-	12.853				
Total Adjustments				-0.764	-	-0.085	-	-0.085				
• Congressional General Reductions				-	-							
• Congressional Directed Reductions				-	-							
• Congressional Rescissions				-	-							
• Congressional Adds				-	-							
• Congressional Directed Transfers				-	-							
• Reprogrammings				-	-							
• SBIR/STTR Transfer				-0.764	-							
• Other Adjustments				-	-	-0.085	-	-0.085				
C. Accomplishments/Planned Programs (\$ in Millions)									FY 2014	FY 2015	FY 2016	
Title: Operate and Upgrade Maui Space Surveillance System (MSSS)									20.166	11.002	10.853	
Description: Operate and upgrade the MSSS to support development, demonstration, and integration of ground-based optical SSA technologies.												
FY 2014 Accomplishments: Maintained MSSS facility and experimental equipment in a mission-ready state. Performed needed upgrades and modernization to keep facilities and equipment in good working order and allow MSSS to perform efficiently and reliably including completing												

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>
refurbishment of 1.6 meter dome. Completed delivery and began installation of the upgraded Laser Guidestar system at MSSS. Implemented procedures and operated MSSS facility for development and demonstration of ground based optical SSA capabilities in conjunction with customer programs and an operational SSA mission.  <b>FY 2015 Plans:</b> Maintain MSSS facility and experimental equipment in a mission-ready state. Perform needed upgrades and modernization to keep facilities and equipment in good working order and allow MSSS to perform efficiently and reliably. Operate MSSS facility for development and demonstration of ground based optical SSA capabilities in conjunction with customer programs and an operational SSA mission. Complete installation and testing of equipment for upgraded Laser Guidestar system at MSSS.  <b>FY 2016 Plans:</b> Maintain MSSS facility and experimental equipment in a mission-ready state. Perform needed upgrades and modernization to keep facilities and equipment in good working order and allow MSSS to perform efficiently and reliably. Operate MSSS facility for development and demonstration of ground based optical SSA capabilities in conjunction with customer programs and an operational SSA mission. Demonstrate operation of Laser Guidestar system at MSSS.				
<b>Title:</b> Geosynchronous Object Sensor  <b>Description:</b> Develop and demonstrate dual-use integrated sensor technology for imaging of geosynchronous objects as well as other long-range applications.  <b>FY 2014 Accomplishments:</b> Continued to develop laser detection and ranging transceiver for initial low-power technology demonstration to image objects in geosynchronous orbit.  <b>FY 2015 Plans:</b> Integrate low power transceiver hardware prior to low power testing to image objects in geosynchronous orbit.  <b>FY 2016 Plans:</b> Conduct low power demonstration of augmented objects for refinement of high power system. Begin build-out of high-power transceiver hardware and initiate telescope modifications for future demonstration of laser imaging of objects in geosynchronous orbit.		5.369	3.029	2.000
<b>Accomplishments/Planned Programs Subtotals</b>		25.535	14.031	12.853
<b>D. Other Program Funding Summary (\$ in Millions)</b> N/A				

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<b>D. Other Program Funding Summary (\$ in Millions)</b>		
<b>Remarks</b>		
<b>E. Acquisition Strategy</b> N/A		
<b>F. Performance Metrics</b> 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.		