Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Missile Defense Agency											Date: February 2016	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603895C *I Ballistic Missile Defense System Space Programs*							
COST ($ in Millions)	**Prior Years**	**FY 2015**	**FY 2016**	**FY 2017 Base**	**FY 2017 OCO**	**FY 2017 Total**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**Cost To Complete**	**Total Cost**
Total Program Element	46.748	7.560	21.507	20.690	-	20.690	15.670	11.641	11.796	11.992	Continuing	Continuing
MD33: *MD Space Exp Center (MDSEC)*	46.161	7.191	20.483	19.755	-	19.755	14.911	11.049	11.190	11.360	Continuing	Continuing
MD40: *Program-Wide Support*	0.587	0.369	1.024	0.935	-	0.935	0.759	0.592	0.606	0.632	Continuing	Continuing
Program MDAP/MAIS Code: 362												

Note

N/A

A. Mission Description and Budget Item Justification

This program element funds the Spacebased Kill Assessment (SKA) project, a Missile Defense Agency (MDA) experiment to demonstrate kill assessment from space. MDA experience with intercept testing on the Aegis BMD program provided solid understanding of the physics of kill assessment.

Several events set the stage for the kill assessment experiment that later became known as SKA:
- Section 237 in the FY 2014 National Defense Authorization Act directed MDA to improve kill assessment for the GMD program with an initial kill assessment capability by December 31, 2019
- An MDA study called the “Space Layer Option Study” found that disaggregated systems could provide sensor capabilities at lower costs
- A once in a decade opportunity became available when the commercial sector offered hosted payload services at costs far below what MDA could expect if it used traditional DOD space acquisition models

One feature of the SKA acquisition plays a crucial role in the execution of the experiment: schedule discipline. Since MDA cannot impact the schedule of the commercial host, maintaining schedule pace is priority #1 on the program. If SKA payloads are delivered late to the commercial host, they miss their opportunity to be launched into space.

SKA incorporates recent Government Accountability Office (GAO) recommendations to examine the operational feasibility of disaggregating large satellites (report number GAO-15-7) and to provide data for the business case for shared or dedicated satellite control, including the ground antenna networks (report number GAO-13-315). The SKA experiment will utilize a network of small IR sensors integrated onto commercial host satellites which, while on orbit, will observe missile defense intercepts and deliver a kill assessment declaration to the BMDS. If deemed successful by the warfighter, SKA has the opportunity to change the economics of the defense of the American homeland from enemy ballistic missiles.

MD40 Program-Wide Support (PWS) consists of essential non-headquarters management efforts providing integrated and efficient support to MDA functions and activities across the entire BMDS.

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Missile Defense Agency	Date: February 2016
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603895C *I Ballistic Missile Defense System Space Programs*

B. Program Change Summary ($ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	6.389	23.289	21.433	-	21.433
Current President's Budget	7.560	21.507	20.690	-	20.690
Total Adjustments	1.171	-1.782	-0.743	-	-0.743
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-1.782			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	1.278	0.000			
• SBIR/STTR Transfer	-0.107	0.000			
• Other Adjustment	0.000	0.000	-0.743	-	-0.743

Change Summary Explanation

The FY 2015 adjustments reflect a reallocation of $0.107M for SBIR/STTR Transfer and a reallocation of $1.278M from PE 06039893C for Spacebased Kill Assessment development.

The FY 2017 adjustment reflects a realignment of Department of Defense priorities.

Exhibit R-2A, RDT&E Project Justification: PB 2017 Missile Defense Agency			Date: February 2016
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603895C / *Ballistic Missile Defense System Space Programs*	Project (Number/Name) MD33 / *MD Space Exp Center (MDSEC)*	

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
MD33: *MD Space Exp Center (MDSEC)*	46.161	7.191	20.483	19.755	-	19.755	14.911	11.049	11.190	11.360	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

A. Mission Description and Budget Item Justification

The SKA system is made up of two segments: a space segment and a ground segment.
- The space segment is made up of a network of sensors (sensors, processor cards and cabling), each mated to a different satellite; and the total number of sensors and where they are placed in the network are specifically tailored for the kill assessment mission.
- The ground segment is a small network of desktop computers, servers and routers that monitor the health of the on-orbit sensors, command the sensors to perform the kill assessment mission and analyze the data to make a kill assessment determination for the BMDS. The ground segment also includes the equipment necessary for communications security and information assurance. The MDSC will act as the communications hub for SKA data.

The SKA sensors are hosted on satellites that are not developed by MDA, thus schedule performance is the highest priority of the experiment. Since the launch of the host satellites will not wait for hosted payloads that are delivered late, the management of the SKA project focuses on the ability to meet schedule commitments. In the past year, the commercial satellite host has announced small changes to its launch schedule; however, those changes have not affected SKA delivery commitments to the satellite integrator - the SKA project remains on schedule.

Through FY 2015 in program element 0603895C, the MDSC provided capabilities and infrastructure to support the BMDS as the single location for MDA elements to conduct space operations. It provided a multi-level security environment for sensor data management and integration across space and terrestrial sensor data activities. MDSC experiments leveraged DoD (Defense Support Program, Space Based Infrared System) and national security space capabilities. MDSC activities supported analysis, demonstration and integration of space sensor capabilities into developmental and operational MDA elements. MDSC enabled the development of advanced technology and algorithms including fusion of multiple sensor types (radar, overhead persistent infrared, electro-optical and other emerging sensor technologies). It also supported mission integration of space-based missile tracking, sensor and weapons cueing via Command and Control, Battle Management and Communications, features and discrimination, kill and impact point assessments into the BMDS and other non-MDA mission areas, including Space Situational Awareness, technical intelligence, and battle space characterization. This effort will continue in program element 0603893C beginning in FY 2016.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017
Title: Missile Defense Space Center (MDSC)	3.592	0.000	0.000
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017
Description: The MDSC provides a central collaborative environment to develop, operate, exploit, and integrate Joint Space Capabilities for the BMDS. This effort will continue in program element 0603893C beginning in FY 2016. ***FY 2015 Accomplishments:*** - Supported launch, integration, and operations of future MDA space capabilities - Supported Hardware-in-the Loop (HWIL) Engage-On STSS satellites tests and fulfill Overhead Persistent Infrared (OPIR) requests for STSS data based on satellite availability - Conducted analysis of space radiation environment and its influence on MDA space system performance - Conducted analysis of space based sensor data from STSS and OPIR observations, both individually and combined, to identify phenomenology and techniques to aid future tracking and discrimination architectures - Supported concept studies and analysis for alternative sensor payload configurations (e.g. hosted payloads) - Developed and integrated real-time algorithms for dim target detection and tracking, discrimination support, hit/kill assessment, and wideband infrared sensor data integration and exploitation - Conducted algorithm development, performance assessments, architecture assessments, and concept evaluations of future MDA space-layer options. - Provided future space-layer capability risk reduction through analysis, test and demonstration - Supported Air Force Space Command and joint mission partners with Space Situational Awareness, technical intelligence, battlespace awareness, and missile warning ***FY 2016 Plans:*** N/A ***FY 2017 Plans:*** N/A			
Title: Spacebased Kill Assessment	3.599	20.483	19.755
Articles:	-	-	-
Description: Experimental system designed to demonstrate kill assessment for Homeland Defense ***FY 2015 Accomplishments:*** The following tasks were accomplished with the residual FY 2013 funds from program element 0604883C and appropriated funds in 0603895C - Assembled and delivered sensor assembly engineering model #1 and qualification model #1 and conducted testing - Completed build out of initial instantiation of the ground segment development facility and processing equipment in December 2014			

Exhibit R-2A, RDT&E Project Justification: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017
- Conducted Critical Design Review with warfighter and military service participation in January 2015 - Conducted Flight Model Manufacturing Review (previously called Production Readiness Review) in April 2015 - Conducted Mission Operations Review in May 2015 - Began assembly of sensor flight models in May 2015 - Conducted Pre-Environmental Review in August 2015 - Conducted Ground System Mission Simulation #1 (of 4) in September 2015 ***FY 2016 Plans:*** Increase from FY 2015 to FY 2016 is for additional effort to complete development and begin integration and testing of the Spacebased Kill Assessment payload. - Conducted Ground System Mission Simulation #2 (of 4) in November 2015 - Delivered first group of flight unit sensors to integrator in November 2015 - Complete sensor assembly and testing of SKA flight units - Complete delivery of flight unit sensors to integrator - Integrating and testing of SKA payload onto host payload module - Integrating and testing of host payload module onto host satellite - Prepare for on-orbit checkout of first SKA sensors ***FY 2017 Plans:*** Starting in FY 2017 funds begin to decrease for SKA as the project transitions from development to experimentation - Complete the integration and test of last SKA payloads onto hosted payload modules - Complete the integration and test of hosted payload modules onto host satellites - Complete preparations for on-orbit checkout of SKA sensors - Conduct on-orbit deployment, checkout, calibration and commissioning of the sensor network once on orbit - Test the integration and flow of data among the SKA sensors, the host communications network and the elements of the BMDS - Begin on-orbit operations by experimenting and participating in BMDS flight and ground tests as commissioned sensors become available			
Accomplishments/Planned Programs Subtotals	7.191	20.483	19.755

Exhibit R-2A, RDT&E Project Justification: PB 2017 Missile Defense Agency			Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• 0603882C: *Ballistic Missile Defense Midcourse Defense Segment*	863.965	1,269.913	862.080	-	862.080	701.311	585.079	600.710	535.614	Continuing	Continuing
• 0603884C: *Ballistic Missile Defense Sensors*	260.347	228.392	230.077	-	230.077	144.893	141.815	171.644	158.421	Continuing	Continuing
• 0603892C: *AEGIS BMD*	761.646	830.647	959.066	-	959.066	841.738	700.596	592.940	528.744	Continuing	Continuing
• 0603893C: *Space Tracking and Surveillance System*	29.530	28.605	32.129	-	32.129	33.869	34.884	36.203	36.821	Continuing	Continuing
• 0603896C: *Ballistic Missile Defense Command and Control, Battle Management & Communication*	420.516	429.853	439.617	-	439.617	413.198	432.763	454.601	462.065	Continuing	Continuing
• 0603904C: *Missile Defense Integration and Operations Center (MDIOC)*	53.972	47.939	54.750	-	54.750	53.894	55.524	58.100	59.029	Continuing	Continuing
• 0603914C: *Ballistic Missile Defense Test*	354.414	281.740	293.441	-	293.441	337.537	322.334	346.134	351.933	Continuing	Continuing
• 0603915C: *Ballistic Missile Defense Targets*	447.424	527.563	563.576	-	563.576	471.059	431.349	454.830	462.429	Continuing	Continuing

Remarks

D. Acquisition Strategy

SKA leverages experience that the Johns Hopkins University Applied Physics Laboratory (JHU/APL) has with its extensive history of performing kill assessment activities and conducting experiments associated with the Aegis BMD program. JHU/APL is the developer of the SKA experiment and its primary subcontractor will be responsible for payload integration and hosting accommodation using a firm fixed price contract to contain costs. The SKA experiment uses a commercial satellite program as the platform host for a DOD payload, taking full advantage of a multi-billion dollar space and ground system that already exists. Since MDA and JHU/APL cannot impact the launch schedule of the commercial satellite host, fiscal stability and commitment is required which is a small tradeoff for the significant cost savings that commercial hosting provides.

MDSC functions and operations were financed through a 10-year MDSC Joint National Integration Center Research and Development Contract Services Contract. The sole-source contractor, Northrop Grumman Information Systems, was responsible for integrating Research, Development, Test and Evaluation, operations support,

Exhibit R-2A, RDT&E Project Justification: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*

and resource and infrastructure management for the MDSC, providing customer support, while achieving efficiencies through approaches that exceed customer requirements. This effort will continue in program element 0603893C beginning in FY 2016.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Missile Defense Agency			Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Missile Defense Space Center (MDSC) - Contract Support Services (CSS)	C/Various	Various, MDA : CO/AL	5.255	0.668		0.000		0.000		-		0.000	0	5.923	0
Missile Defense Space Center (MDSC) - MDA Civilian	Allot	MDA : Schriever AFB, CO	2.219	0.930		0.000		0.000		-		0.000	0	3.149	0
Spacebased Kill Assessment - Contract Support Services (CSS)	C/Various	Various, MDA : CO/AL	0.000	0.122		0.142	Oct 2015	0.187	Nov 2016	-		0.187	Continuing	Continuing	Continuing
Spacebased Kill Assessment - FFRDC	FFRDC	Various : CO/AL/MD/VA	0.339	0.556		0.397	Oct 2015	0.748	Nov 2016	-		0.748	Continuing	Continuing	Continuing
Spacebased Kill Assessment - IT User Services	C/CPAF	Northrop Grumman : AL, AK, CA, CO, HI, NM, VA	0.000	0.000		0.039	Oct 2015	0.043	Oct 2016	-		0.043	Continuing	Continuing	Continuing
Spacebased Kill Assessment - MDA Civilian	Allot	MDA : VA	0.000	0.194		0.205	Oct 2015	0.207	Oct 2016	-		0.207	Continuing	Continuing	Continuing
Spacebased Kill Assessment - Program Mission Support	C/Various	Various : CO/AL/MD/VA	0.150	0.726		0.032	Oct 2015	0.137	Oct 2016	-		0.137	Continuing	Continuing	Continuing
		Subtotal	7.963	3.196		0.815		1.322		-		1.322	-	-	-

Remarks

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

Funding for the Spacebased Kill Assessment was initiated in PE 0604883C, budget project MD10.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Missile Defense Space Center (MDSC) - MDSC Support (JRDC Services Contract)	SS/CPAF	NGIS : Schriever AFB, CO	31.152	1.994		0.000		0.000		-		0.000	0	33.146	36.537
Missile Defense Space Center (MDSC) - MDSC/ Enterprise Sensors Laboratory (ESL) Experiments	C/Various	Various : Various	7.046	0.000		0.000		0.000		-		0.000	0	7.046	7.351
Spacebased Kill Assessment - Spacebased Kill Assessment Development and Experimentation	C/CPFF	JHU/APL : Laurel, MD	0.000	2.001		19.668	Oct 2015	18.433	Oct 2016	-		18.433	Continuing	Continuing	Continuing
		Subtotal	38.198	3.995		19.668		18.433		-		18.433	-	-	-

Remarks

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

Funding for the Spacebased Kill Assessment was initiated in PE 0604883C, budget project MD10.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

Remarks

N/A

	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	46.161	7.191		20.483		19.755		-		19.755	-	-	-

Remarks

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*

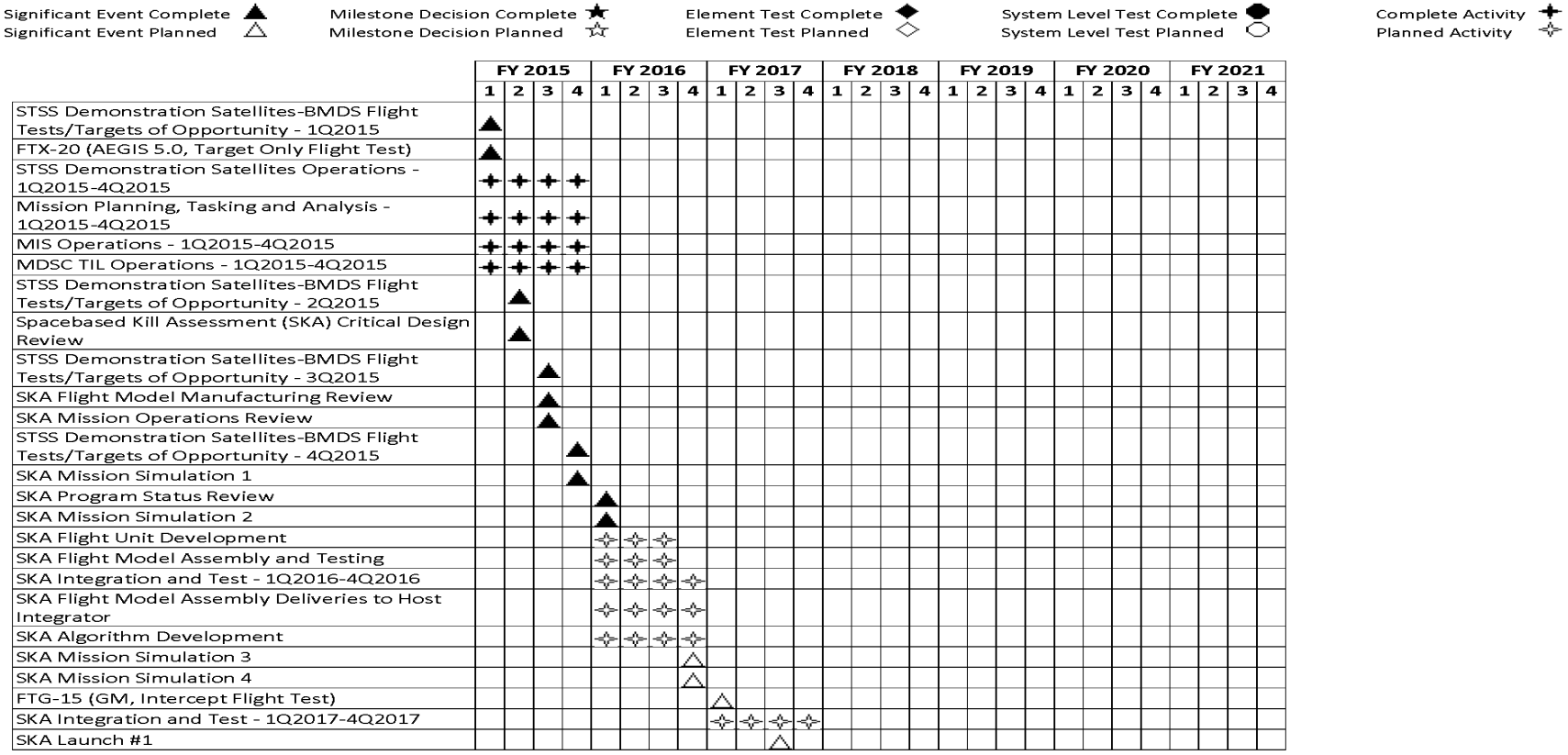


Exhibit R-4, RDT&E Schedule Profile: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*

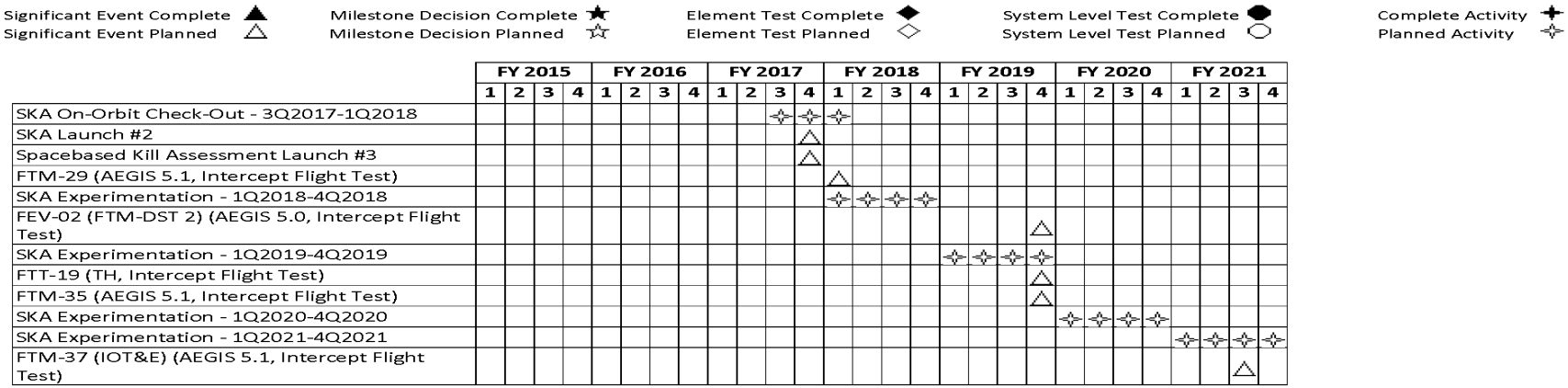


Exhibit R-4A, RDT&E Schedule Details: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
STSS Demonstration Satellites-BMDS Flight Tests/Targets of Opportunity - 1Q2015	1	2015	1	2015
FTX-20 (AEGIS 5.0, Target Only Flight Test)	1	2015	1	2015
STSS Demonstration Satellites Operations - 1Q2015-4Q2015	1	2015	4	2015
Mission Planning, Tasking and Analysis - 1Q2015-4Q2015	1	2015	4	2015
MIS Operations - 1Q2015-4Q2015	1	2015	4	2015
MDSC TIL Operations - 1Q2015-4Q2015	1	2015	4	2015
STSS Demonstration Satellites-BMDS Flight Tests/Targets of Opportunity - 2Q2015	2	2015	2	2015
Spacebased Kill Assessment (SKA) Critical Design Review	2	2015	2	2015
STSS Demonstration Satellites-BMDS Flight Tests/Targets of Opportunity - 3Q2015	3	2015	3	2015
SKA Flight Model Manufacturing Review	3	2015	3	2015
SKA Mission Operations Review	3	2015	3	2015
STSS Demonstration Satellites-BMDS Flight Tests/Targets of Opportunity - 4Q2015	4	2015	4	2015
SKA Mission Simulation 1	4	2015	4	2015
SKA Program Status Review	1	2016	1	2016
SKA Mission Simulation 2	1	2016	1	2016
SKA Flight Unit Development	1	2016	3	2016
SKA Flight Model Assembly and Testing	1	2016	3	2016
SKA Integration and Test - 1Q2016-4Q2016	1	2016	4	2016
SKA Flight Model Assembly Deliveries to Host Integrator	1	2016	4	2016
SKA Algorithm Development	1	2016	4	2016
SKA Mission Simulation 3	4	2016	4	2016
SKA Mission Simulation 4	4	2016	4	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD33 / *MD Space Exp Center (MDSEC)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
FTG-15 (GM, Intercept Flight Test)	1	2017	1	2017
SKA Integration and Test - 1Q2017-4Q2017	1	2017	4	2017
SKA Launch #1	3	2017	3	2017
SKA On-Orbit Check-Out - 3Q2017-1Q2018	3	2017	1	2018
SKA Launch #2	4	2017	4	2017
Spacebased Kill Assessment Launch #3	4	2017	4	2017
FTM-29 (AEGIS 5.1, Intercept Flight Test)	1	2018	1	2018
SKA Experimentation - 1Q2018-4Q2018	1	2018	4	2018
FEV-02 (FTM-DST 2) (AEGIS 5.0, Intercept Flight Test)	4	2019	4	2019
SKA Experimentation - 1Q2019-4Q2019	1	2019	4	2019
FTT-19 (TH, Intercept Flight Test)	4	2019	4	2019
FTM-35 (AEGIS 5.1, Intercept Flight Test)	4	2019	4	2019
SKA Experimentation - 1Q2020-4Q2020	1	2020	4	2020
SKA Experimentation - 1Q2021-4Q2021	1	2021	4	2021
FTM-37 (IOT&E) (AEGIS 5.1, Intercept Flight Test)	3	2021	3	2021

Exhibit R-2A, RDT&E Project Justification: PB 2017 Missile Defense Agency			Date: February 2016
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603895C / *Ballistic Missile Defense System Space Programs*	Project (Number/Name) MD40 / *Program-Wide Support*	

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
MD40: *Program-Wide Support*	0.587	0.369	1.024	0.935	-	0.935	0.759	0.592	0.606	0.632	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2016, Program Wide Support (PWS) reflects a proportional change as a result of increases in Ballistic Missile Defense System Space Programs and in FY 2017, PWS reflects a proportional change as a result of decreases to the Ballistic Missile Defense System Space Programs.
Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts and Military Interdepartmental Purchase Requests on the R-3.

A. Mission Description and Budget Item Justification

PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians, and Contract Support Services. This provides integrity and oversight of the BMDS as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes Global Deployment personnel and support performing deployment site preparation and activation and, provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs includes: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; and similar operating expenses. PWS is allocated on a pro-rata basis and therefore, fluctuates by year based on the adjusted RDT&E profile (which excludes: 0305103C Cyber Security Initiative, 0603274C Special Programs, 0603913C Israeli Cooperative Program and 0901598C Management Headquarters).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017
Title: Program Wide Support	0.369	1.024	0.935
Articles:	-	-	-
Description: N/A			
FY 2015 Accomplishments: See paragraph A: Mission Description and Budget Item Justification			
FY 2016 Plans: See paragraph A: Mission Description and Budget Item Justification			
FY 2017 Plans: - See paragraph A: Mission Description and Budget Item Justification			
Accomplishments/Planned Programs Subtotals	0.369	1.024	0.935

Exhibit R-2A, RDT&E Project Justification: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD40 / *Program-Wide Support*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Missile Defense Agency			Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD40 / *Program-Wide Support*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Wide Support - Agency Facilities and Maintenance SRM (MIPR)	MIPR	Various : Multi: AL, CO, CA, VA, AK	0.000	0.343		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	C/CPAF	Various : Multi: AL, CA, CO, VA	0.496	0.026		0.000		0.019	Jul 2017	-		0.019	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various : Multi: Al, CA, CO, VA	0.091	0.000		1.024	Nov 2015	0.916	Aug 2017	-		0.916	Continuing	Continuing	Continuing
		Subtotal	0.587	0.369		1.024		0.935		-		0.935	-	-	-

Remarks

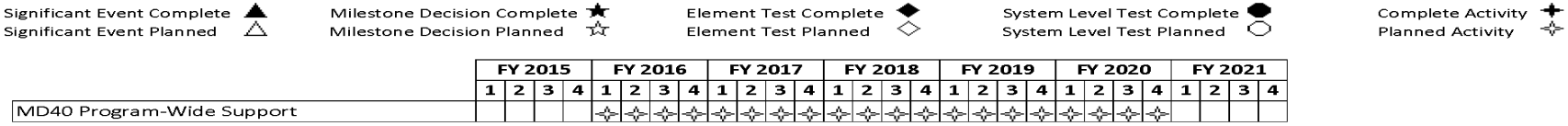
N/A

	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.587	0.369		1.024		0.935		-		0.935	-	-	-

Remarks

N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD40 / *Program-Wide Support*



	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
MD40 Program-Wide Support					✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧				

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0603895C / *Ballistic Missile Defense System Space Programs*	**Project (Number/Name)** MD40 / *Program-Wide Support*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
MD40 Program-Wide Support	1	2016	4	2020

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