

UNCLASSIFIED

PE NUMBER: 0305160F

PE TITLE: Defense Meteorological Satellite Program

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305160F Defense Meteorological Satellite Program
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	3.749	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	912.077
4758 DMSP Program	3.749	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	912.077

(U) A. Mission Description and Budget Item Justification

The Defense Meteorological Satellite Program (DMSP) is a fully operational program supporting a broad range of strategic and tactical national security users that require timely and accurate global weather information. DMSP is a critically important tool enabling commanders to effectively employ weapon systems and protect DoD resources in any operational battlespace. DMSP is DoD's only assured source of global weather data providing visible and infrared cloud cover imagery (1/3 nautical miles (nm) constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. At least two satellites (one in each of two orbit planes) are required in sun-synchronous, 450nm polar-orbit at all times (sun-synchronous means the satellites cross the equator at the same local sun time on each of their 14 orbits/day).

DMSP F-15 was the first Block 5D3 spacecraft (with legacy sensors) and was launched on a Titan-II booster in Dec 99. Premature attitude determination gyro failures on DMSP F-15 exposed a fleet-wide life-limiting problem with the attitude determination gyros that will fly on all remaining DMSP satellites. Mini-Inertial Measurement Units (MIMUs) are being integrated to DMSPs F-17 through F-20 to reduce risk of mission failures due to gyro problems. DMSP F-16 was launched in Oct 03 aboard the last Titan II booster and is the first 'full-up' Block 5D3 (spacecraft bus plus sensors). Operational imperatives drove a need to launch DMSP F-16 before it could be integrated with a MIMU to provide attitude determination system redundancy. DMSP F-16 flies a new series of highly capable microwave and ultraviolet sensors to perform comprehensive environmental sensing. A number of systemic problems were identified during those sensors' calibration and validation period that will be addressed prior to the launch of all remaining satellites. The program office will implement a service life extension program on F19 and F20 to increase projected lifetime from 4 to 5 years. The Spacecraft Integration & Test (SIT) contract for spacecraft support and the Independent Verification and Validation contract for test flight software were both awarded in Jun 02. DMSP's consolidated sensors support and services follow-on contract was awarded in Nov 04. DMSP F-17 was launched on a Delta IV booster on 4 Nov 06. DMSP F-18's launch is scheduled for 3rd Quarter FY08 on an Atlas V.

This program is in Budget Activity 7, Operational Systems Development, because it supports the current operational DMSP constellation.

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(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	3.852	0.969		
(U) Current PBR/President's Budget	3.749	0.963		
(U) Total Adjustments	-0.103	-0.006		
(U) Congressional Program Reductions		-0.002		
Congressional Rescissions		-0.004		
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer	-0.103			
(U) <u>Significant Program Changes:</u>				

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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4758 DMSP Program	3.749	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	912.077
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) **A. Mission Description and Budget Item Justification**

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This program is in Budget Activity 7, Operational Systems Development, because it supports the current operational DMSP constellation.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Continue system integration and test, studies, and related support activities	2.072	0.500		
(U) Continue EELV interface design (transition to EELV)	1.677	0.463		
(U) Total Cost	3.749	0.963	0.000	0.000

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) AF RDT&E										
(U) Other APPN										
(U) Missile Procurement/PE 0305160F (P-24)	68.034	86.376	127.350	101.136	102.580	95.301	86.300	78.899	12.782	3,069.577
Related RDT&E:										
PE 0305178F, National Polar-orbiting Operational Environmental Satellite System (NPOESS)										
PE 0305160N, Navy Meteorological and Oceanographic Sensor-Space (METOC) (provides funds for Navy unique studies)										

(U) D. Acquisition Strategy

Support and services contracts for the spacecraft, sensors, ground systems, and supporting software have been awarded to various contractors. No major milestone decisions remain. Production of DMSP satellites has been completed. Remaining effort is to continue spacecraft and sensor integration and test and successfully launch remaining DMSP satellites.

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Exhibit R-3, RDT&E Project Cost Analysis

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(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2006</u> <u>Cost</u>	<u>FY 2006</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2009</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
				<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>			
					<u>Date</u>		<u>Date</u>				<u>Date</u>			
(U) <u>Product Development</u>														
Lockheed -Martin	SS/CPAF		3.764										3.764	
Lockheed-Martin	SS/CPAF		11.064										11.064	
Northrop-Grumman (CSS&S)	SS/CPAF		13.208										13.208	
Lockheed-Martin	C/CPAF		39.513										39.513	
Lockheed-Martin	C/CPAF		6.456	3.749	Feb-06	0.963	Oct-06						11.168	
Harris (SSMIS/STT SW)	C/CPAF		8.617										8.617	
Det 11/GSA (Mark IVB P3I)	MIPR		2.986										2.986	
Lockheed-Martin (Titan II Msn Unique Studies)	SS/CPAF		5.953										5.953	
Boeing (EELV Msn Unique Studies & Services)	SS/CPAF		2.585										2.585	
Aerojet	SS/CPAF		2.530										2.530	
Aerojet	C/CPAF/F FP		85.979										85.979	
Aerojet (SSM/TW/IS S&S & Model + SSMIS)	SS/CPAF		2.183										2.183	
Raytheon, formerly Hughes (SSMI Spt & Svc)	SS/CPFF		0.236										0.236	
AFRL	MIPR/PD		5.838										5.838	
NRL	MIPR/Var		15.782										15.782	
APL	MIPR/Var		4.332										4.332	
SMC (Det 3 SSSG/NPOESS)	FCA/MIP R		2.506										2.506	
Sandia	MIPR/Var		0.820										0.820	
NOAA			0.034										0.034	
Other	Various		6.671										6.671	
Historical Satellite Blocks	Various		583.786										583.786	
NONE													0.000	
Subtotal Product Development			804.843	3.749		0.963		0.000		0.000		0.000	809.555	0.000
Remarks:														
(U) <u>Support</u>														
FFRDC	AF 277		25.623										25.623	
PRC/BD Systems/TASS	C/CPAF		9.515										9.515	
Program Mgmt			22.720										22.720	
Litigation Support			1.809										1.809	
Other	Various		4.325										4.325	
Historical Satellite Blocks	Various		38.530										38.530	

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Project 4758

Exhibit R-3 (PE 0305160F)

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Exhibit R-3, RDT&E Project Cost Analysis

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NONE								0.000		
Subtotal Support	102.522	0.000	0.000	0.000	0.000	0.000	0.000	102.522	0.000	
Remarks:										
(U) <u>Test & Evaluation</u>										
NONE								0.000		
NONE								0.000		
Subtotal Test & Evaluation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Remarks:										
(U) <u>Management</u>										
Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Remarks:										
(U) Total Cost	907.365	3.749	0.963	0.000	0.000	0.000	0.000	912.077	0.000	

Exhibit R-4, RDT&E Schedule Profile

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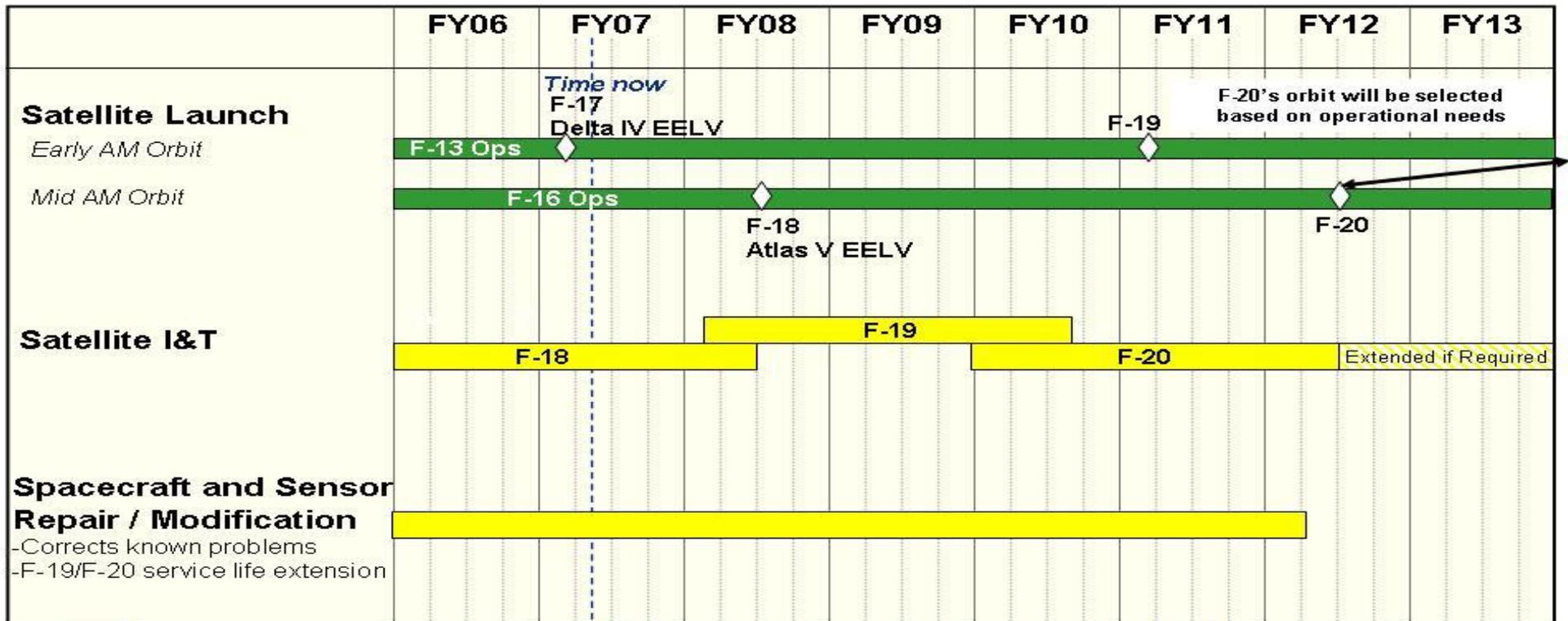
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Satellite Program

PROJECT NUMBER AND TITLE
4758 DMSP Program

DMSP Schedule



- Concept activities
- Production / fielding
- Design / development
- Operations / sustainment
- Integration / test
- Key events

EELV: Evolved Expendable Launch Vehicle I&T: Integration and Test

Exhibit R-4a, RDT&E Schedule Detail

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0305160F Defense Meteorological
Satellite Program

PROJECT NUMBER AND TITLE

4758 DMSP Program

(U) Schedule Profile

FY 2006

FY 2007

FY 2008

FY 2009

(U) F-17 Satellite Launch

1Q

(U) F-18 Satellite Launch

3Q