

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

June 2001

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

07 - Operational System Development

0305160F Defense Meteorological Satellite Program

4758

COST (\$ in Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
4758 DMSP Program	20,339	25,139	12,259	7,892	8,716	7,843	7,974	8,997	0	936,598
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

NOTE: This administration has not addressed FY 2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.

(U) **A. Mission Description**

The Defense Meteorological Satellite Program (DMSP) is a fully operational program supporting all military services. Operational commanders require timely, quality weather information to effectively employ weapon systems and protect DoD resources. DMSP is the DoD's most important and often the only source of global weather data to support US military operations. It provides visible and infrared cloud cover imagery (1/3 nm constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. At least two satellites 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). Presidential Decision Directive PDD/NSTC-2 directed convergence of DMSP with the National Oceanic and Atmospheric Administration's (NOAA) POES polar-orbiting weather satellite system. A key step towards full program convergence was achieved in FY98 when DMSP satellite operations consolidated with NOAA satellite operations at NOAA's Suitland, MD, Satellite Operations Control Center (SOCC). DMSP F-15 was launched on a Titan-II booster in Dec 99. DMSP F-16 will be the last DMSP to launch on a Titan-II booster and is currently scheduled to launch in Nov of 2001. The remaining DMSPs, F-17 through F-20, are all manifested to launch on an Evolved Expendable Launch Vehicle (EELV) booster.

(U) **FY 2000 (\$ in Thousands)**

- (U) \$13,015 Continued system integration and test, and related support activities
- (U) \$988 Continued Titan II integration effort
- (U) \$3,916 Continued EELV interface design (transition to EELV)
- (U) \$981 Continued Small Tactical Terminal (field portable weather terminal) Special Sensor Microwave Imager and Sounder (SSMIS) software upgrades
- (U) \$1,439 Began SSMIS calibration and validation
- (U) \$20,339 Total

The following net transactions are not reflected in the FY00 program total: BTR--\$137K. This transaction is not reflected in other sections of the R-Docs where an FY00 total is shown.

Project 4758

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DATE

June 2001

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

07 - Operational System Development**0305160F Defense Meteorological Satellite Program****4758**(U) **A. Mission Description Continued**(U) FY 2001 (\$ in Thousands)

(U) \$15,520 Continued system integration and test, and related support activities

(U) \$941 Completed Titan II integration effort

(U) \$3,602 Continued EELV interface design (transition to EELV)

(U) \$1,678 Completed integration studies and test analysis to retrofit DMSP satellites with solid state recorders (SSRs)

(U) \$3,398 Continued SSMIS calibration and validation

(U) \$25,139 Total

The following net transactions are not reflected in the FY01 program total: BTR = -\$2.2M and SBIR = -\$786K. These transactions are not reflected in other sections of the R-Docs where an FY01 total is shown.

(U) FY 2002 (\$ in Thousands)

(U) \$9,601 Continue system integration and test, and related support activities

(U) \$1,550 Continue EELV interface design (transition to EELV)

(U) \$1,108 Continue SSMIS calibration and validation

(U) \$12,259 Total

(U) **B. Budget Activity Justification**

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

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2001 PBR)	21,207	25,372	14,934	955,279
(U) Appropriated Value	21,535	25,372		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-212	-178		
b. Small Business Innovative Research	-783			
c. Omnibus or Other Above Threshold Reprogram	-117			
d. Below Threshold Reprogram				
e. Rescissions	-84	-55		
(U) Adjustments to Budget Years Since FY 2001 PBR			-2,675	

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE June 2001																																																									
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07 - Operational System Development				0305160F Defense Meteorological Satellite Program				4758																																																								
<p>(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: right;"><u>FY 2000</u></th> <th style="text-align: right;"><u>FY 2001</u></th> <th style="text-align: right;"><u>FY 2002</u></th> <th style="text-align: right;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Current Budget Submit/FY 2002 PBR</td> <td style="text-align: right;">20,339</td> <td style="text-align: right;">25,139</td> <td style="text-align: right;">12,259</td> <td style="text-align: right;">936,598</td> </tr> </tbody> </table> <p>(U) <u>Significant Program Changes:</u> Funding: FY02-07 adjusted downward due to a Zero Based Transfer of mission sensor support and services and calibration/validation funding from RDT&E to Missile Procurement to appropriately align funding with the work being performed.</p> <p>Schedule: Satellite Launch (F-16) rescheduled from 23 Jan 01 to not earlier than 14 Nov 01.</p> <p>Technical: None</p>											<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>	(U) Current Budget Submit/FY 2002 PBR	20,339	25,139	12,259	936,598																																													
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	<u>FY 2000</u> <u>Actual</u>	<u>FY 2001</u> <u>Estimate</u>	<u>FY 2002</u> <u>Estimate</u>	<u>FY 2003</u> <u>Estimate</u>	<u>FY 2004</u> <u>Estimate</u>	<u>FY 2005</u> <u>Estimate</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>																																																						
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(U) **E. 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. The program is focused on successful completion of current contracts, award of follow-on Spacecraft Integration & Test and Independent Verification & Validation contracts, plus contractor support for spacecraft, sensors, and ground systems already procured.

(U) **F. Schedule Profile**FY 2000FY 2001FY 2002

1	2	3	4	1	2	3	4	1	2	3	4
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*

(U) Satellite Launch (F-15)

(U) Satellite Launch (F-16)

X

(U) Sensor Support/Services Contract Consolidation

*

(U) Tactical Terminal Program funding transferred to AF Weather Agency

*

* = Completed event

X = Planned event

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001			
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT		
07 - Operational System Development					0305160F Defense Meteorological Satellite Program			4758		
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
						<u>FY 2000</u>	<u>FY 2001</u>		<u>FY 2002</u>	
(U)	Launch Vehicle Transition*					4,904	4,543		1,550	
(U)	Spacecraft Integration and Test**					4,698	8,367		1,458	
(U)	Calibration/Validation***					1,439	4,765		2,726	
(U)	Algorithm Development					436	210		233	
(U)	MARK IVB/STT Enhancements					1,421	0		0	
(U)	Systems Engineering Support					4,701	3,777		3,350	
(U)	Program Management Support					2,740	3,477		2,942	
(U)	Total					20,339	25,139		12,259	
* A necessary portion of the Launch Vehicle Transition funding slipped into FY01 due to a change in the EELV booster contractor from Lockheed Martin Missiles & Space to Boeing. This requirement must be accomplished by the end of FY02 to maintain the integration and launch schedule for DMSP F-17.										
** Spacecraft Integration and Test funding increases in FY01 due to Special Sensor Microwave Imager/Sounder (SSMIS) and Solid State Recorder (SSR) integration studies/analysis for DMSP F-17.										
*** Calibration/Validation funding increases in FY01 due to required Naval Research Laboratory and Aerojet Corporation calibration & validation of the first on-orbit SSMIS. DMSP F-16, scheduled to launch in early FY02, will carry the first SSMIS. Critical calibration/validation work is required to enable the new sensor to provide operationally useful data.										
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or</u>	<u>Contract</u>									
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
Lockheed -Martin	SS/CPAF	Apr 92	3,764	3,764	3,764				0	3,764
Lockheed-Martin (EELV Int Design)	SS/CPAF	May 97	17,867	17,867	1,871	3,368	4,070	3,008	5,550	17,867
Northrop-Grummn (SSR&OLS)	SS/CPAF	May 95	7,412	7,412	5,509	225	1,678		0	7,412
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE June 2001		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
07 - Operational System Development				0305160F Defense Meteorological Satellite Program				4758		
(U) <u>Performing Organizations Continued:</u>										
<u>Product Development Organizations</u>										
Northrop-Grummn (CSS&S)	SS/CPAF	May 00	13,901	13,901			5,547	1,618	6,736	13,901
Lockheed-Martin	C/CPAF	Oct 88	39,513	39,513	39,513				0	39,513
Harris (SSMIS/STT SW)	C/CPAF	Jun 94	8,617	8,617	7,196	1,421			0	8,617
Det 11/GSA (Mark IVB P3I)	MIPR	Jan 97	2,986	2,986	2,986				0	2,986
SMC/CL (Titan) TII & EELV PO		Oct 94	5,018	5,018	3,089	988	941		0	5,018
Msn Unique)										
Boeing (EELV Msn Unique	SS/CPAF	May 00	472	472		472			0	472
Studies)										
Boeing (EELV Msn Unique	SS/CPAF	Jul 00	545	545		545				545
Studies & Services)										
Aerojet	SS/CPAF	May 92	2,530	2,530	2,530				0	2,530
Aerojet	C/CPAF/FFP	Mar 89	85,979	85,979	85,979				0	85,979
Aerojet (SSM/TW/IS S&S &	SS/CPAF	May 98	2,183	2,183	1,635	548			0	2,183
Model + SSMIS)										
Raytheon, formerly Hughes	SS/CPFF	May 96	236	236	227	9			0	236
(SSMI Spt & Svc)										
AFRL	MIPR/PD	Oct 95			4,625	589	75		0	5,289
NRL	MIPR/Var	Oct 95			6,537	3,023	3,850	1,321	400	15,131
APL	MIPR/Var	Oct 95			2,624	859	55		0	3,538
SMC (Det 3 SSSG/NPOESS)	FCA/MIPR	Dec 95			2,506				0	2,506
SMC/CC							1,000			1,000
Sandia	MIPR/Var	Oct 96			200	420	200		0	820
NOAA							34			34
Other	Various				2,587	431	435	20		3,473
Historical Satellite Blocks	Various				583,786					583,786
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07 - Operational System Development				0305160F Defense Meteorological Satellite Program					4758								
(U) <u>Performing Organizations Continued:</u>																	
<u>Support and Management Organizations</u>																	
FFRDC		MORD		Oct 95		17,019		3,481		2,647		2,051		4,560		29,758	
PRC/BD Systems		C/CPAF		Aug 95		5,792		1,220		1,130		1,299		6,996		16,437	
Program Mgmt						15,167		2,740		3,477		2,942		17,180		41,506	
Litigation Support						1,809								0		1,809	
Other		Various		Jul 91		1,958								0		1,958	
Historical Satellite Blocks		Various				38,530								0		38,530	
<u>Test and Evaluation Organizations</u>																	
NONE																	
(U) <u>Government Furnished Property:</u>																	
<u>Contract</u>																	
<u>Method/Type</u>																	
<u>Award or</u>																	
<u>Obligation</u>																	
<u>Delivery</u>																	
<u>Total Prior</u>																	
<u>Budget</u>																	
<u>Budget</u>																	
<u>Budget</u>																	
<u>Budget to</u>																	
<u>Total</u>																	
<u>Item</u>																	
<u>Description</u>																	
<u>Vehicle</u>																	
<u>Date</u>																	
<u>Date</u>																	
<u>to FY 2000</u>																	
<u>FY 2000</u>																	
<u>FY 2001</u>																	
<u>FY 2002</u>																	
<u>Complete</u>																	
<u>Program</u>																	
<u>Product Development Property</u>																	
NONE																	
<u>Support and Management Property</u>																	
NONE																	
<u>Test and Evaluation Property</u>																	
NONE																	
<u>Total Prior</u>																	
<u>Budget</u>																	
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<u>Total</u>																	
<u>Subtotals</u>																	
<u>to FY 2000</u>																	
<u>FY 2000</u>																	
<u>FY 2001</u>																	
<u>FY 2002</u>																	
<u>Complete</u>																	
<u>Program</u>																	
Subtotal Product Development																	
757,164																	
12,898																	
17,885																	
5,967																	
12,686																	
806,600																	
Subtotal Support and Management																	
80,275																	
7,441																	
7,254																	
6,292																	
28,736																	
129,998																	
Subtotal Test and Evaluation																	
Total Project																	
837,439																	
20,339																	
25,139																	
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