

**UNCLASSIFIED**

PE NUMBER: 0604441F

PE TITLE: Space Based Infrared Systems (SBIRS) High EMD

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>								DATE <b>February 2004</b>	
BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>				PE NUMBER AND TITLE <b>0604441F Space Based Infrared Systems (SBIRS) High EMD</b>					
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	775.346	610.230	508.448	373.353	310.628	381.646	342.713	984.700	6,986.751
3616 SBIRS High Element EMD	775.346	610.230	508.448	373.353	310.628	381.646	342.713	984.700	6,986.751

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

(U) The Space-Based Infrared System's (SBIRS) primary mission is to provide initial warning of a ballistic missile attack on the US, its deployed forces or its allies. SBIRS will incorporate new technologies to enhance detection, and improve reporting of intercontinental ballistic missile launches, submarine launched ballistic missile launches, and tactical ballistic missile launches. SBIRS supports Battlespace Characterization and Technical Intelligence missions by providing reliable, accurate, and timely data to Unified Combatant Commanders, Joint Task Force (JTF) Commanders, the intelligence community, and other users. SBIRS provides increased detection and tracking performance in order to meet requirements in US Space Command's Capstone Requirements Document and Air Force Space Command's Operational Requirements Document. SBIRS will consist of satellites in Geosynchronous Earth Orbit (GEO), payloads hosted on satellites in Highly Elliptical Orbit (HEO), an integrated centralized ground station serving all SBIRS space elements, Defense Support Program (DSP) satellites, and program and other related support activities.

(U) This program is assigned to Budget Activity 5, System Development and Demonstration (SDD), because it funds the development activities for the SBIRS High program.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	775.395	617.229	508.919
(U) Current PBR/President's Budget	775.346	610.230	508.448
(U) Total Adjustments	-0.049	-6.999	
(U) Congressional Program Reductions		-6.999	
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer	-0.049		
(U) <u>Significant Program Changes:</u>			

**Exhibit R-2a, RDT&E Project Justification**

DATE  
**February 2004**

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Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total	
3616 SBIRS High Element EMD	775.346	610.230	508.448	373.353	310.628	381.646	342.713	984.700	6,986.751	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

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

(U) The Space-Based Infrared System's (SBIRS) primary mission is to provide initial warning of a ballistic missile attack on the US, its deployed forces or its allies. SBIRS will incorporate new technologies to enhance detection, and improve reporting of intercontinental ballistic missile launches, submarine launched ballistic missile launches, and tactical ballistic missile launches. SBIRS supports Battlespace Characterization and Technical Intelligence missions by providing reliable, accurate, and timely data to Unified Combatant Commanders, Joint Task Force (JTF) Commanders, the intelligence community, and other users. SBIRS provides increased detection and tracking performance in order to meet requirements in US Space Command's Capstone Requirements Document and Air Force Space Command's Operational Requirements Document. SBIRS will consist of satellites in Geosynchronous Earth Orbit (GEO), payloads hosted on satellites in Highly Elliptical Orbit (HEO), an integrated centralized ground station serving all SBIRS space elements, Defense Support Program (DSP) satellites, and program and other related support activities.

(U) This program is assigned to Budget Activity 5, System Development and Demonstration (SDD), because it funds the development activities for the SBIRS High program.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Continue EMD contracts for Space and Ground segment development (includes GFE, continued GEO satellite development, GEO 1&2 integration, assembly and test, HEO development/production, HEO 2 integration, assembly, and test, Ground System development, System Engineering and Program Management, Increment 1 Pre-operations support, Host SPO support, Combined Task Force (CTF) support activities, and continue systems integration and test studies, and related support activities).	736.070		
(U) Continue System Program Office Support.	13.772	7.508	8.849
(U) Continue technical analysis and independent verification and validation of contractor by FFRDC.	25.504	27.482	26.494
(U) Continue EMD contracts for Space and Ground segment development (includes GFE, continued GEO development, GEO 1&2 integration, assembly and test, HEO development/production/on-orbit support, HEO 2 integration, assembly and test, Ground System development, System Engineering and Program Management, Host SPO support, Technical Intelligence activities, CTF support activities, and continue systems integration and test studies, and related support activities).		575.240	473.105
(U) Total Cost	775.346	610.230	508.448

## Exhibit R-2a, RDT&amp;E Project Justification

DATE

February 2004

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

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Systems (SBIRS) High EMD

PROJECT NUMBER AND TITLE

3616 SBIRS High Element EMD

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

The pre-SDD SBIRS contracts were competed in full and open competition. Two contracts were awarded to Lockheed/Loral/Aerojet and Hughes/TRW in 1995 for the pre-SDD phase. A single contract was awarded to Lockheed Martin in 1996 for the SDD phase.

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Exhibit R-3, RDT&E Project Cost Analysis										DATE <b>February 2004</b>		
BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>				PE NUMBER AND TITLE <b>0604441F Space Based Infrared Systems (SBIRS) High EMD</b>				PROJECT NUMBER AND TITLE <b>3616 SBIRS High Element EMD</b>				
<u>(U) Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total</u> Prior to FY 2003 Cost	<u>FY</u> 2003 Cost	<u>FY</u> 2003 Award	<u>FY</u> 2004 Cost	<u>FY</u> 2004 Award	<u>FY</u> 2005 Cost	<u>FY</u> 2005 Award	<u>Cost to Complete</u>	<u>Total</u> Cost	<u>Target</u> Value of Contract
<u>(U) Product Development</u>												
LMMS & Hughes (Pre-SDD)	C/CPFF		159.600							0.000	159.600	
LMMS (SDD)	C/CPAF	Lockheed Martin, Sunnyvale, CA	2,352.564	736.070	Oct-02	575.240	Oct-03	473.105	Oct-04	2,168.386	6,305.365	6,305.386
SBIRS Pre-SDD Contract Adjustment			4.780							0.000	4.780	
Technology	Various		11.600							0.000	11.600	
Phenomenology	Various		17.350							0.000	17.350	
Sandia Natl Lab (Cobra Brass)	Various		10.000							0.000	10.000	
Not Applicable											0.000	
Subtotal Product Development			2,555.894	736.070		575.240		473.105		2,168.386	6,508.695	6,305.386
Remarks:												
<u>(U) Support</u>												
Aerospace Corp	MORD	Aerospace Corp, El Segundo CA	98.417	25.504	Oct-02	27.482	Oct-03	26.494	Oct-04	151.726	329.623	329.623
Prgm Mgmt Supt	Various	Various	45.376	13.772	Oct-02	7.508	Oct-03	8.849	Oct-04	72.928	148.433	153.542
Subtotal Support			143.793	39.276		34.990		35.343		224.654	478.056	483.165
Remarks:												
<u>(U) Test &amp; Evaluation</u>												
Not Applicable											0.000	
Subtotal Test & Evaluation			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
Remarks:												
<u>(U) Total Cost</u>			2,699.687	775.346		610.230		508.448		2,393.040	6,986.751	6,788.551

Exhibit R-4, RDT&E Schedule Profile

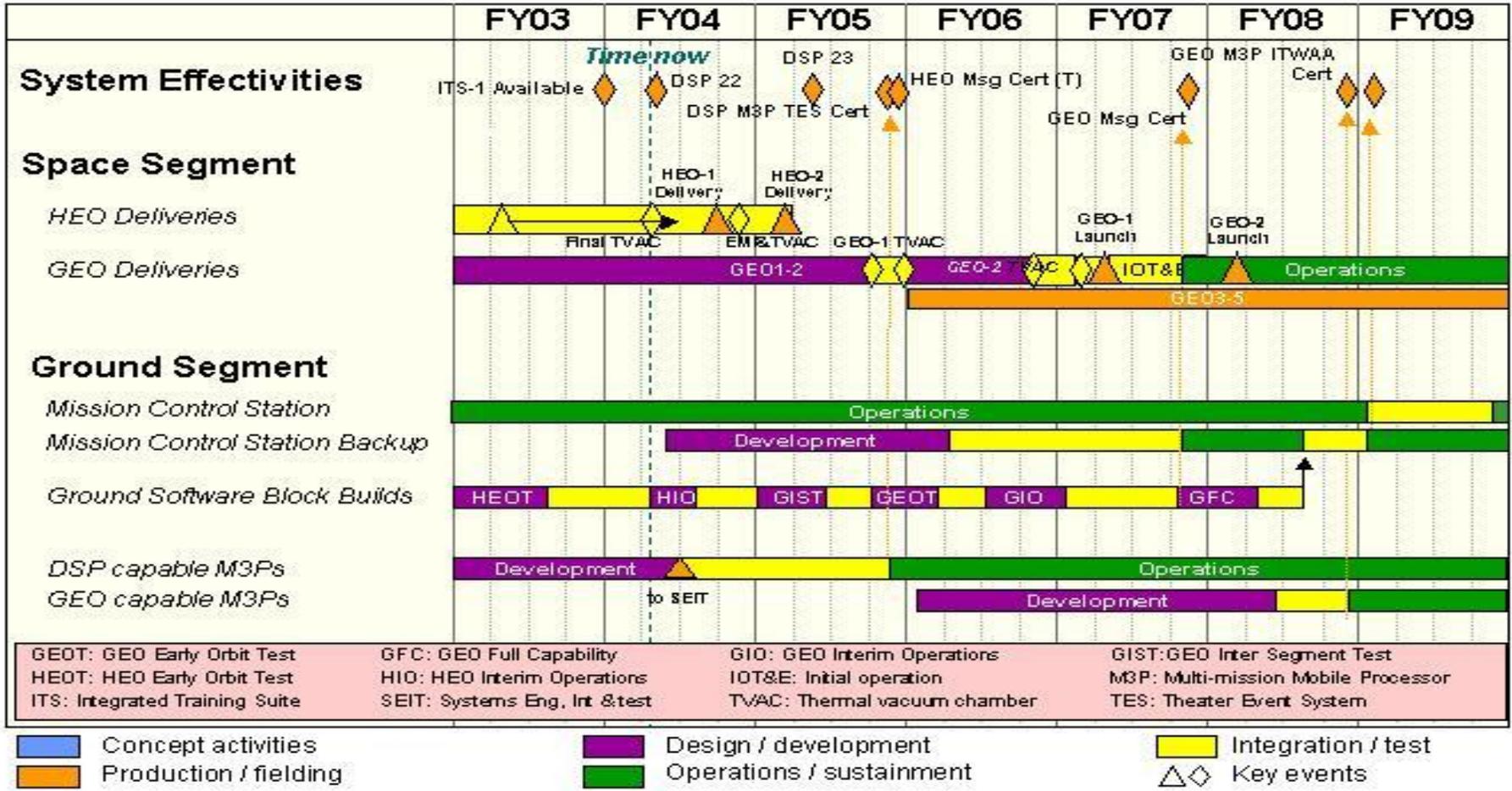
DATE

February 2004

BUDGET ACTIVITY  
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE  
0604441F Space Based Infrared  
Systems (SBIRS) High EMD

PROJECT NUMBER AND TITLE  
3616 SBIRS High Element EMD



<b>Exhibit R-4a, RDT&amp;E Schedule Detail</b>	DATE <b>February 2004</b>
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<b>BUDGET ACTIVITY</b> <b>05 System Development and Demonstration (SDD)</b>	<b>PE NUMBER AND TITLE</b> <b>0604441F Space Based Infrared Systems (SBIRS) High EMD</b>	<b>PROJECT NUMBER AND TITLE</b> <b>3616 SBIRS High Element EMD</b>
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<b>(U) <u>Schedule Profile</u></b>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Effectivity 1 - Interim Mission Control Station - Backup (IMCS-B) Certification	1Q		
(U) Integrated Training System available	4Q		
(U) HEO sensor #1 delivery		4Q	
(U) DSP capable M3P to Systems engineering, integration & test team (SEIT)		2Q	
(U) HEO interim operations		2-3Q	
(U) HEO Sensor #2 Delivery			1Q
(U) Effectivity 3 HEO message certification			4Q
(U) Effectivity 4 - DM3P Theater Event System (TES) Certification			4Q