

UNCLASSIFIED

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

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604251F SPACE-BASED RADAR EMD

PROJECT

5009

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
5009 SBR Concept and Technology Development	23,137	0	0	0	0	0	0	0	0	23,250
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

FY02 funding was initially loaded in PE 0604251F (BA 5); however, all future funding for this program has been transferred to PE 0603858F, Space Based Radar Dem/Val (BA 4).

(U) A. Mission Description

The 2001 Multi-Theater Target Tracking Capability (MT3C) Mission Needs Statement (MNS) establishes the requirement for continuous multi-theater surveillance, identification, tracking, and targeting of surface-moving targets. In November 2001 USD(AT&L) directed a focused requirements and risk reduction effort to provide a space element of a future air/space Intelligence, Surveillance, and Reconnaissance (ISR) system to satisfy the MT3C MNS.

The Space Based Radar (SBR) program is focused to mature technology and develop an ISR system capable of providing Ground Moving Target Indication (GMTI), Synthetic Aperture Radar (SAR) imaging, and Digital Terrain and Elevation Data (DTED) over a large portion of the Earth on a near-continuous basis. The system will maximize utility to the tactical warfighters through responsive tasking and timely data dissemination. The SBR system will allow military forces a 'deep-look' into denied areas of interest, on a non-intrusive basis without risk to personnel or resources. This can be done across the spectrum of conflict and simultaneously in multiple theaters which is not currently available with existing capabilities.

Technology maturation, risk reduction and concept development are essential elements of the SBR program strategy. Investments in key risk areas are focused to mature technologies leading to component design and demonstration. Concept development activities will focus on reducing risk, integrating technologies, and evaluating system level concepts within the broad range of the C2ISR architecture. Demonstrations as well as modeling and simulation will maximize the operational capabilities of the SBR system.

(U) FY 2002 (\$ in Thousands)

- (U) \$0 Accomplishments/Planned Program
- (U) \$12,337 Began Technology Risk Reduction (continuation of classified FY01 Electronically Scanned Array (ESA) effort; start on-board processing efforts; begin BMC3 effort; provide Demonstration support)
- (U) \$8,500 Began Requirements Development (SBR system and operational requirements definition)
- (U) \$2,300 Provided Program Support (Concept Evaluation, Schedule Management, Independent Cost Analysis, Technical Evaluation, Source Selection)

Project 5009

Page 1 of 5 Pages

Exhibit R-2 (PE 0604251F)

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PROJECT

05 - System Development and Demonstration (SDD)**0604251F SPACE-BASED RADAR EMD****5009**(U) **A. Mission Description Continued**(U) **FY 2002 (\$ in Thousands) Continued**

(U) \$23,137 Total

Funding Tail FY03-07 has been programmed into the budget in PE 0603858F, SBR Dem/Val, to develop a viable and executable program.

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program

(U) \$0 No Activity - Program funded in PE 0603858F, Space-Based Radar Dem/Val effective in FY03

(U) \$0 Total

(U) **FY 2004 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program

(U) \$0 No Activity

(U) \$0 Total

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

This activity is BA 4 because all efforts are included in the Advanced Component Development and Prototypes (ACD&P) phase and are necessary to evaluate integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

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

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
(U) Previous President's Budget	24,752			23,250
(U) Appropriated Value	25,000			25,000
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-361			
b. Small Business Innovative Research	-1,502			
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram				
e. Rescissions				
(U) Adjustments to Budget Years Since FY 2003 PBR				
(U) Current Budget Submit/FY 2004 PBR	23,137			23,250
23250				

Project 5009

Page 2 of 5 Pages

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05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604251F SPACE-BASED RADAR EMD

PROJECT

5009(U) **C. Program Change Summary (\$ in Thousands) Continued**(U) **Significant Program Changes:**

Revised funding tail FY03 - 09 has been programmed into the budget in PE 0603858F, SBR Dem/Val, to develop a viable and executable program.

(U) **D. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u> <u>Actual</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>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) AF RDT&E										
(U) RDT&E-AF, PE 0603858F, Space Based Radar (SBR) Dem/Val		47,149	274,104	358,669	467,459	503,772	1,178,181	1,547,545	Continuing	TBD
(U) RDT&E-AF, PE 0602500F, Multi-Disciplinary Space Technonogy		42,546								42,546
(U) Other APPN										
(U) None										

(U) **E. Acquisition Strategy**

(U) The Air Force will lead the SBR Joint Program Office with the National Reconnaissance Office (NRO) as the principal partner. The acquisition strategy will consist of a mixture of sole source and competitive award approaches.

(U) **F. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Began Requirements Development		*										
(U) Analysis of Alternatives (AoA) supporting contracts in place		*										
(U) Began AoA		*										
(U) Began Technology Risk Reduction		*										

Legend: * = Completed Events; X = Planned Events

Narrative: N/A

Project 5009

Page 3 of 5 Pages

Exhibit R-2 (PE 0604251F)

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003																																																																																																																																					
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05 - System Development and Demonstration (SDD)				0604251F SPACE-BASED RADAR EMD				5009	
(U) <u>Government Furnished Property:</u>									
	<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>							
<u>Item</u>	<u>or Funding</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>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</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>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>				<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development					20,837			0	20,837
Subtotal Support and Management					2,300			0	2,300
Subtotal Test and Evaluation									
Total Project					23,137			0	23,137
All FYDP funding FY03 and beyond is included in PE 0603858F, Space-Based Radar Dem/Val.									

Project 5009

Page 5 of 5 Pages

Exhibit R-3 (PE 0604251F)