

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

DATE

February 2003

BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305911F Defense Support Program

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
Total Program Element (PE) Cost	5,890	2,024	0	0	0	0	0	0	0	1,927,968
3615 Shield/Alert	3,824	0	0	0	0	0	0	0	0	71,029
3624 Defense Support Program	2,066	2,024	0	0	0	0	0	0	0	1,856,939
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

In FY2003, Project number 3615, SHIELD/Alert effort transferred to Space Based Infrared System (SBIRS) Engineering and Manufacturing Development, PE 0604441F. Project 3624, Defense Support Program, was completed.

(U) **A. Mission Description**

The Defense Support Program (DSP) is a system of satellites in geostationary orbits, fixed and mobile ground processing stations, one multi-purpose facility, and a ground communications network. DSP's primary mission is to provide strategic and tactical warning and limited attack assessment of a ballistic missile attack. Shield/ALERT (Attack and Launch Early Reporting to Theater) was a ground station mission processing capability which exploits inherent satellite capability to provide theater missile warning and cueing.

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

DSP is an operational system and is funded in Budget Activity 7, Operational Systems Support because it supports integrating DSP to the new Evolved Expendable Launch Vehicle (EELV) and related support activities.

(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	6,142	2,090	0	1,928,286
(U) Appropriated Value	6,363	2,090		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-249	-57		
b. Small Business Innovative Research	-224			
c. Omnibus or Other Above Threshold Reprogram		-9		

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0305911F Defense Support Program(U) **C. Program Change Summary (\$ in Thousands) Continued**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
d. Below Threshold Reprogram				
e. Rescissions				
(U) Adjustments to Budget Years Since FY 2003 PBR				-318
(U) Current Budget Submit/FY 2004 PBR	5,890	2,024	0	1,927,968
(U) <u>Significant Program Changes:</u>				
(U) FY03: SHIELD effort transferred to the Space Based Infrared System (SBIRS) High program.				
(U) FY03: DSP project was completed.				

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BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305911F Defense Support Program

PROJECT

3615

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
3615 Shield/Alert	3,824	0	0	0	0	0	0	0	0	71,029

(U) **A. Mission Description**

Beginning in 1993, the Talon Shield project developed changes to preexisting DSP processing techniques to provide a Theater Missile Defense capability. These changes provided for the timely and accurate detection, description, and tracking of Tactical Ballistic Missiles and other theater threats, and served as the basis for the activation, on 10 March 1995, of full-time ALERT System operations by the newly constituted 11th Space Warning Squadron. ALERT-generated messages were distributed to theater warfighters; they enhanced attack operations/counterforce operations by providing accurate, timely launch point estimates and supported active and passive defense by providing cueing data to shooters and warning data to theater assets in the form of impact point predictions. Shield continued to serve as a key resource in the evolution of operational improvements to the ALERT System, demonstrating the value of candidate enhancements on a prototype basis in the live, real-time environment. In FY03, effort transferred to Space Based Infrared System, PE 0604441F.

Budget Activity Justification:

DSP is an operational system and is funded in Budget Activity 7, Operational Systems Support.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program
 (U) \$2,807 Continued engineering prototypes and feasibility analysis. Continued SBIRS ground consolidation developmental test and evaluation.
 (U) \$1,017 Performed technical analysis and independent verification and validation of contractor.
 (U) \$3,824 Total

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

(U) \$0 Accomplishments/Planned Program
 (U) \$0 No activity, effort transferred to Space Based Infrared Systems
 (U) \$0 Total

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

(U) \$0 Accomplishments/Planned Program
 (U) \$0 No Activity
 (U) \$0 Total

Project 3615

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BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305911F Defense Support Program

PROJECT

3615**(U) B. Project Change Summary**

(FY03) SHIELD project funds transferred to SBIRS High PE 0604441F as part of the DSP to SBIRS ground consolidation.

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

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) Other APPN										
(U) Missile Procurement (PE 0305911F, BA-05, P-25)	97,609	113,517	113,067	29,406	31,920	37,312	33,372	34,159	0	5,156,355
(U) Related RDT&E:										
(U) PE 0604441F- SBIRS High EMD (RDT&E, BA-05, R-67)	524,459	775,395	617,229	508,919	375,645	311,900	381,936	342,046	292,104	5,947,482

(U) D. Acquisition Strategy

The Shield/ALERT Development effort is contracted with Northrop Grumman Electronic Systems Division, Azusa, CA. Initially awarded as part of the Centralized Tactical Processing Program (CTPP) contract in FY93, the effort was moved to the DSP Sensor Post Production Contract in late FY99. The original award was a five-year contract ending in FY00. Authorization to extend the existing effort through FY03 was granted by SAF/AQ and a contract modification at the end of FY00 added the FY01 effort (with provision to add FY02 and FY03 at a later date).

(U) E. 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) ALERT Version 14.1.9	*											
(U) ALERT Version 14.1.10		*										
(U) Transition to SBIRS					*							
* - Completed Event												
X - Planned Event												

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003			
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT		
07 - Operational System Development					0305911F Defense Support Program				3615		
(U) A. Project Cost Breakdown (\$ in Thousands)											
					FY 2002		FY 2003		FY 2004		
(U)	Software Development				1,200		0		0		
(U)	Program Management Support				384		0		0		
(U)	Developmental Test and Evaluation				1,223		0		0		
(U)	Federally Funded Research and Development Contractor (FFRDC)				1,017		0		0		
(U)	Total				3,824		0		0		
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)											
(U) Performing Organizations:											
<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>Activity</u>		<u>Vehicle</u>		<u>Date</u>		<u>EAC</u>		<u>EAC</u>		<u>to FY 2002</u>	
								<u>Budget</u>		<u>Budget</u>	
								<u>FY 2002</u>		<u>FY 2003</u>	
								<u>FY 2004</u>		<u>Budget to</u>	
								<u>Complete</u>		<u>Total</u>	
										<u>Program</u>	
<u>Product Development Organizations</u>											
	Aerojet	CPAF	Aug 92	7,898	7,898	7,898				0	7,898
	SPARTA	CPAF	Aug 94	487	487	487				0	487
	Lincoln Lab	PO	Mar 95	288	288	288				0	288
	Aerojet (FO)	CPAF	Oct 96	40,185	40,185	37,471	2,807	0	0	0	40,278
	Nichols Research Corporation			2,378	2,378	2,378				0	2,378
<u>Support and Management Organizations</u>											
	Program Office Support			N/A	N/A	67				0	67
	FFRDC			N/A	N/A	11,627	1,017	0	0	0	12,644
	Dept Air Force			N/A	N/A	6,989				0	6,989
<u>Test and Evaluation Organizations</u>											

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE February 2003	
BUDGET ACTIVITY		PE NUMBER AND TITLE				PROJECT
07 - Operational System Development		0305911F Defense Support Program				3615
		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
<u>Subtotals</u>						<u>Program</u>
Subtotal Product Development		48,522	2,807	0	0	51,329
Subtotal Support and Management		18,683	1,017	0	0	19,700
Subtotal Test and Evaluation						
Total Project		67,205	3,824	0	0	71,029

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BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305911F Defense Support Program

PROJECT

3624

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
3624 Defense Support Program	2,066	2,024	0	0	0	0	0	0	0	1,856,939

In FY2003, project 3624, Defense Support Program was completed.

(U) **A. Mission Description**

The Defense Support Program (DSP) system provides a space-based surveillance system to detect and report missile and space launches and nuclear detonations in near real time during pre-, trans-, and post-attack periods. The DSP system consists of a constellation of satellites in geostationary orbits, fixed and mobile ground processing stations, one multi-purpose facility, and a ground communications network. DSP's primary mission is to provide strategic and tactical warning and limited attack assessment of a ballistic missile attack. DSP also detects and reports nuclear detonation events and provides information for theater warning and exploitation. This project funds the DSP-to-SBIRS transition activities and EELV mission unique engineering integration. The FY03 program funds mission unique engineering efforts to integrate DSP-23 on EELV.

Budget Activity Justification:

DSP is an operational system and is funded in Budget activity 7, Operational systems Support because it supports integrating DSP to the new Evolved Expendable Launch Vehicle (EELV) and related support activities.

(U) **FY 2002 (\$ in Thousands)**

- (U) \$0 Accomplishments/Planned Program
 (U) \$2,066 Continued integration efforts for DSP 23 on Evolved Expendable Launch Vehicle (EELV).
 (U) \$2,066 Total

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

- (U) \$0 Accomplishments/Planned Program
 (U) \$2,024 Complete integration efforts for DSP 23 on Evolved Expendable Launch Vehicle (EELV).
 (U) \$2,024 Total

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

- (U) \$0 Accomplishments/Planned Program
 (U) \$0 No Activity.
 (U) \$0 Total

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BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305911F Defense Support Program

PROJECT

3624(U) **B. Project Change Summary**(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) Other APPN										
(U) Missile Procurement (PE 0305911F, BA-05, P-28)	97,609	113,517	113,067	29,406	31,920	37,312	33,372	34,159	0	5,156,355
(U) Related RDT&E:										
(U) PE 0604441F - SBIRS High EMD	524,459	775,395	617,229	508,919	375,645	311,900	381,936	342,046	292,104	5,947,482

(U) **D. Acquisition Strategy**

DSP has finished the production of satellites through DSP 23. Current contract efforts include support for Flight 22 and 23 launch and sustainment for post production storage testing, launch preparation, and on orbit testing. These efforts were added to the existing DSP Spacecraft and Sensor Post Production Support contracts. The Space Based Infrared Systems (SBIRS) satellites will be the follow-on system to DSP.

(U) **E. 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) DSP 22 Launch									X			
(U) DSP 23 Launch (FY05)												
* - Completed Event												
X - Planned Event												

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003				
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT			
07 - Operational System Development				0305911F Defense Support Program				3624			
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>											
						<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U) DSP 23 Integration on EELV-Heavy						2,066		2,024		0	
(U) Total						2,066		2,024		0	
(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>Activity</u>		<u>Vehicle</u>		<u>Date</u>		<u>EAC</u>		<u>EAC</u>		<u>to FY 2002</u>	
								<u>Budget</u>		<u>Budget</u>	
								<u>FY 2002</u>		<u>FY 2003</u>	
								<u>FY 2004</u>		<u>Budget to</u>	
								<u>Complete</u>		<u>Total</u>	
										<u>Program</u>	
<u>Product Development Organizations</u>											
Previous DSP Contracts		Various		Various		N/A		N/A		1,536,317	
(1960's-1980's)										0	
Boeing		FFP		Jul 00		7,252		7,252		3,162	
Aerojet*		C/CPAF		Oct 93		25,719		25,719		25,719	
Aerojet		C/CPAF		Sep 93		9,025		9,025		9,025	
Aerojet		C/CPFF				25,743		25,743		25,743	
Aerojet		C/CPAF		Oct 96		2,578		2,578		2,578	
Loral		C/FPI/AF/CPF				37,732		37,732		37,732	
DOE		P.O.				10,724		10,724		10,724	
Loral		C/CPAF				22,975		22,975		22,975	
* EAC is also funded by other appropriations.											
<u>Support and Management Organizations</u>											
Various		MIPRs		As needed						9,706	
Aerojet		C/ CPFF				1,305		1,305		1,305	
Aerojet/										0	
Consolidated		C/ FFP		Oct 96		4,724		4,724		4,724	
FFRDC		MORD				N/A		N/A		42,109	
Other Gov't Cost						N/A		N/A		35,036	
Project 3624											
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003			
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
07 - Operational System Development				0305911F Defense Support Program				3624		
(U) <u>Performing Organizations Continued:</u>										
* EAC is also funded by other appropriations.										
<u>Support and Management Organizations</u>										
TRW	C/CPFF		9,872	9,872	9,872			0	9,872	
TRW Consolidated	C/CPAF	Oct 96	292	292	292			0	292	
PRC	C/FPIF	Apr 94	7,579	7,579	7,579			0	7,579	
SPARTA	C/CPAF	Aug 94	150	150	150			0	150	
<u>Test and Evaluation Organizations</u>										
Program Office Support	Various	As needed	N/A	N/A	68,101			0	68,101	
					<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					1,673,975	2,066	2,024	0	0	1,678,065
Subtotal Support and Management					110,773				0	110,773
Subtotal Test and Evaluation					68,101				0	68,101
Total Project					1,852,849	2,066	2,024	0	0	1,856,939

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