

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2002																																				
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0305911F Defense Support Program																																								
COST (\$ in Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost																																			
Total Program Element (PE) Cost	12,779	6,142	2,090	0	0	0	0	0	1,928,286																																			
3615 Shield/Alert	7,312	4,048	0	0	0	0	0	0	71,253																																			
3624 Defense Support Program	5,467	2,094	2,090	0	0	0	0	0	1,857,033																																			
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0																																			
(U) <u>A. Mission Description</u> 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) is a ground station mission processing capability which exploits inherent satellite capability to provide theater missile warning and cueing. (U) <u>B. Budget Activity Justification</u> 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). (U) <u>C. Program Change Summary (\$ in Thousands)</u> <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th></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>FY 2003</u></th> <th style="text-align: right;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: right;">9,374</td> <td style="text-align: right;">6,363</td> <td style="text-align: right;">6,639</td> <td style="text-align: right;">1,929,651</td> </tr> <tr> <td>(U) Appropriated Value</td> <td style="text-align: right;">9,462</td> <td style="text-align: right;">6,363</td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">a. Congressional/General Reductions</td> <td style="text-align: right;">-67</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">b. Small Business Innovative Research</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">c. Omnibus or Other Above Threshold Reprogram</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>											<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>	(U) Previous President's Budget	9,374	6,363	6,639	1,929,651	(U) Appropriated Value	9,462	6,363			(U) Adjustments to Appropriated Value					a. Congressional/General Reductions	-67				b. Small Business Innovative Research					c. Omnibus or Other Above Threshold Reprogram				
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>																																								
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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

February 2002

BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305911F Defense Support Program

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

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>
d. Below Threshold Reprogram	3,405			
e. Rescissions	-21	-221		
(U) Adjustments to Budget Years Since FY 2002 PBR			-4,549	
(U) Current Budget Submit/FY 2003 PBR	12,779	6,142	2,090	1,928,286

(U) Significant Program Changes:

(U) FY01:

(1) \$2 million transferred into DSP to support DSP integration into EELV.

(2) \$1.405 million transferred into DSP to fund Space Based Surveillance Operations ACTD.

(U) FY03: SHIELD effort transferred to the Space Based Infrared System (SBIRS) High program.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2002	
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0305911F Defense Support Program				PROJECT 3615	
COST (\$ in Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
3615 Shield/Alert	7,312	4,048	0	0	0	0	0	0	71,253
(U) <u>A. Mission Description</u> 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 are distributed to theater warfighters; they enhance attack operations/counterforce operations by providing accurate, timely launch point estimates and support active and passive defense by providing cueing data to shooters and warning data to theater assets in the form of impact point predictions. Shield has 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. (U) <u>FY 2001 (\$ in Thousands)</u> (U) \$4,799 Continued engineering prototypes and feasibility analysis. (U) \$1,243 Continued SBIRS ground consolidation developmental test and evaluation. (U) \$1,270 Performed technical analysis and independent verification and validation of contractor. (U) \$7,312 Total (U) <u>FY 2002 (\$ in Thousands)</u> (U) \$2,824 Continued engineering prototypes and feasibility analysis. Continue SBIRS ground consolidation developmental test and evaluation. (U) \$1,224 Performed technical analysis and independent verification and validation of contractor. (U) \$4,048 Total (U) <u>FY 2003 (\$ in Thousands)</u> (U) \$0 No activity, effort transfered to Space Based Infrared Systems (SBIRS) (U) \$0 Total (U) <u>B. Project Change Summary</u> (FY03) SHIELD project funds transfered to SBIRS High PE 0604441F as part of the DSP to SBIRS ground consolidation.									
Project 3615			Page 3 of 11 Pages				Exhibit R-2A (PE 0305911F)		

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2002				
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT				
07 - Operational System Development				0305911F Defense Support Program				3615				
(U) C. Other Program Funding Summary (\$ in Thousands)												
	<u>FY 2001</u>	<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>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>Complete</u>				
(U) AF RDT&E												
(U) Other APPN												
(U) Missile Procurement (PE 0305911F, BA-05, P-25)	101,953	108,973	114,382	117,384	35,210	33,358	34,140	0	5,086,969			
(U) Other Procurement (PE 0305911F, BA-03, P-62)	6	0	0	0	0			0	1,201,700			
(U) Related RDT&E:												
(U) PE 0604442F - SBIRS Low EMD (RDT&E, BA-05, R-68)	233,546	0	0	0	0	0	0	0	493,499			
(U) PE 0604441F- SBIRS High EMD (RDT&E, BA-05, R-67)	550,144	438,720	814,927	620,348	445,606	302,997	308,136	578,800	5,769,700			
SBIRS Low transferred to BMDO (now Missile Defense Agency)												
(U) D. Acquisition Strategy												
The Shield/ALERT Development effort is contracted with Aerojet Electronic Systems Division, Azusa, CA. Initially awarded as part of the Centralized Tactical Processing Program (CTPP) contract in FY95, 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 2001</u>				<u>FY 2002</u>				<u>FY 2003</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) ALERT Version 14.1.6	*											
(U) ALERT Version 14.1.7			*									
(U) ALERT Version 14.1.8				*								
(U) ALERT Version 14.1.9					*							
(U) ALERT Version 14.1.10						*						
Project 3615 Page 4 of 11 Pages Exhibit R-2A (PE 0305911F)												

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)										DATE February 2002																																					
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT																																					
07 - Operational System Development					0305911F Defense Support Program					3615																																					
(U) <u>E. Schedule Profile Continued</u> (U) Transition to SBIRS * - Completed Event X - Planned Event <table style="margin: auto;"> <tr> <th colspan="4"><u>FY 2001</u></th> <th colspan="4"><u>FY 2002</u></th> <th colspan="4"><u>FY 2003</u></th> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td>X</td> <td></td><td></td><td></td><td></td> </tr> </table>												<u>FY 2001</u>				<u>FY 2002</u>				<u>FY 2003</u>				1	2	3	4	1	2	3	4	1	2	3	4								X				
<u>FY 2001</u>				<u>FY 2002</u>				<u>FY 2003</u>																																							
1	2	3	4	1	2	3	4	1	2	3	4																																				
							X																																								
Project 3615				Page 5 of 11 Pages				Exhibit R-2A (PE 0305911F)																																							

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2002				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT	
07 - Operational System Development					0305911F Defense Support Program					3615	
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>											
					<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>		
(U)	Contractor Engineering Support										
(U)	Software Development				3,035		1,200		0		
(U)	Program Management Support				642		384				
(U)	Training Development										
(U)	Developmental Test and Evaluation				2,365		1,240				
(U)	Federally Funded Research and Development Contractor (FFRDC)				1,270		1,224				
(U)	Total				7,312		4,048		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>Performing</u>		<u>Award or</u>									
<u>Activity</u>		<u>Obligation</u>									
<u>Vehicle</u>		<u>Date</u>									
<u>Product Development Organizations</u>											
Aerojet		CPAF		Aug 92		7,898		7,898		0	
SPARTA		CPAF		Aug 94		487		487		0	
Lincoln Lab		PO		Mar 95		288		288		0	
Aerojet (FO)		CPAF		Oct 96		40,185		40,185		31,429	
Nichols Research Corporation						2,378		2,378		2,378	
<u>Support and Management Organizations</u>											
Program Office Support						N/A		N/A		67	
FFRDC						N/A		N/A		10,357	
Dept Air Force						N/A		N/A		6,989	
<u>Test and Evaluation Organizations</u>											

Project 3615

Page 6 of 11 Pages

Exhibit R-3 (PE 0305911F)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE February 2002	
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 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>
						<u>Total</u>
	<u>Subtotals</u>					
	Subtotal Product Development	42,480	6,042	2,714	0	51,236
	Subtotal Support and Management	17,413	1,270	1,334	0	20,017
	Subtotal Test and Evaluation					
	Total Project	59,893	7,312	4,048	0	71,253

Project 3615

Page 7 of 11 Pages

Exhibit R-3 (PE 0305911F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2002	
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0305911F Defense Support Program				PROJECT 3624	
COST (\$ in Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
3624 Defense Support Program	5,467	2,094	2,090	0	0	0	0	0	1,857,033
(U) <u>A. Mission Description</u> 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 changes associated with Advanced Concept Technology Demonstration (ACTD), and 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. (U) <u>FY 2001 (\$ in Thousands)</u> (U) \$2,000 High Altitude Network Determination System (HANDS) (U) \$1,405 Space Based Space Surveillance ACTD (U) \$2,062 Continued integration efforts for DSP 23 on Evolved Expendable Launch Vehicle (EELV). (U) \$5,467 Total (U) <u>FY 2002 (\$ in Thousands)</u> (U) \$2,094 Continued integration efforts for DSP 23 on Evolved Expendable Launch Vehicle (EELV). (U) \$2,094 Total (U) <u>FY 2003 (\$ in Thousands)</u> (U) \$2,090 Complete integration efforts for DSP 23 on Evolved Expendable Launch Vehicle (EELV). (U) \$2,090 Total (U) <u>B. Project Change Summary</u> (FY01) Congress set aside \$2 million for High Altitude Network Determination System (HANDS). (FY01) \$1.405 million transferred to support Space Surveillance ACTD.									
Project 3624			Page 8 of 11 Pages				Exhibit R-2A (PE 0305911F)		

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2002	
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT	
07 - Operational System Development				0305911F Defense Support Program				3624	
(U) C. Other Program Funding Summary (\$ in Thousands)									
	<u>FY 2001</u>	<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>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>Complete</u>	
(U) AF RDT&E									
(U) Other APPN									
(U) Missile Procurement (PE 0305911F, BA-05, P-28)	101,953	108,973	114,382	117,384	35,210	33,358	34,140	0	5,086,969
(U) Other Procurement (PE 0305911F, BA-65, P-N/A)	6	0	0	0	0			0	1,201,700
(U) Related RDT&E:									
(U) PE 0604442F - SBIRS Low EMD	233,546							0	493,499
(U) PE 0604441F - SBIRS High EMD	550,144	438,720	814,927	620,348	445,606	302,997	308,136	578,800	5,769,700
SBIRS Low transferred to BMDO.									
(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 2001</u>			<u>FY 2002</u>			<u>FY 2003</u>		
	1	2	3	4	1	2	3	4	1
(U) DSP 21 Launch				*					
(U) DSP 22 Launch									X
(U) DSP 23 Launch (FY04)									
* - Completed Event									
X - Planned Event									
Project 3624 Page 9 of 11 Pages Exhibit R-2A (PE 0305911F)									

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2002			
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>										
					FY 2001		FY 2002		FY 2003	
(U) Space-Based Space Surveillance Operations ACTD*					1,405		0		0	
(U) High Altitude Network Determination System					2,000		0		0	
(U) DSP 23 Integration on EELV-Heavy					2,062		2,094		2,090	
(U) Total					5,467		2,094		2,090	
*Funding of effort shared with BMDO (now the Missile Defense Agency). See Project Change Summary for funding details.										
(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 2001</u>
<u>Budget</u>		<u>Budget</u>		<u>Budget</u>		<u>Budget</u>		<u>Budget to</u>		<u>Total</u>
<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>		<u>Complete</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		7,346		7,346		1,100
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

Project 3624

Page 10 of 11 Pages

Exhibit R-3 (PE 0305911F)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2002		
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>									
Various	MIPRs	As needed			6,301	3,405		0	9,706
Aerojet	C/ CPFF		1,305	1,305	1,305	0		0	1,305
Aerojet/						0		0	0
Consolidated	C/ FFP	Oct 96	4,724	4,724	4,724	0		0	4,724
FFRDC	MORD		N/A	N/A	42,109	0		0	42,109
Other Gov't Cost			N/A	N/A	35,036	0		0	35,036
TRW	C/CPFF		9,872	9,872	9,872	0		0	9,872
TRW Consolidated	C/CPAF	Oct 96	292	292	292	0		0	292
PRC	C/FPIF	Apr 94	7,579	7,579	7,579	0		0	7,579
SPARTA	C/CPAF	Aug 94	150	150	150	0		0	150
<u>Test and Evaluation Organizations</u>									
Program Office Support	Various	As needed	N/A	N/A	68,101	0		0	68,101
					<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
<u>Subtotals</u>					<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>
Subtotal Product Development					1,671,913	2,062	2,094	2,090	0 1,678,159
Subtotal Support and Management					107,368	3,405			0 110,773
Subtotal Test and Evaluation					68,101	0			0 68,101
Total Project					1,847,382	5,467	2,094	2,090	0 1,857,033

Project 3624

Page 11 of 11 Pages

Exhibit R-3 (PE 0305911F)