PE NUMBER: 0604855F
PE TITLE: Operationally Responsive Launch

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0604855F Operationally Responsive Launch

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	32.142	38.519	0.000	0.000	0.000	0.000	0.000	0.000	87.686
A013 Small Launch Vehicle	32.142	38.519	0.000	0.000	0.000	0.000	0.000	0.000	87.686

In FY 2007 this PE is being closed and the effort transfered to PE 0604857F, Operationally Responsive Space. The new PE recognizes the broader scope of not just responsive launchers, but also satellites and ranges, necessary for a responsive space system.

(U) A. Mission Description and Budget Item Justification

The 2002 Operationally Responsive Spacelift (ORS) Mission Needs Statement (MNS) established the requirement for responsive, on-demand access to, through and from space. This requirement encompasses the spacelift missions of delivering payloads to, or from, mission orbit and changing the orbit of existing systems to better satisfy new mission requirements. It also requires on-demand, flexible, and cost effective operations.

In December 2002 the DepSecDef directed the Air Force and the Defense Advanced Research Projects Agency (DARPA) to establish a joint program office to accelerate the Operationally Responsive Space (ORS) effort to meet portions of this requirement. This joint technology development program has been named Falcon and is focused on the development and transition of more mature technologies into a future weapon system capable of delivering and deploying conventional payloads worldwide from and through space such as Joint Warfighting Space satellites. Concept development, risk reduction and technology maturation are the key elements in the ORS program; and demonstrations, modeling and simulations are the critical tools. Although Falcon is a joint program, the Air Force is funding the ORS portion; DARPA is sharing the Hypersonic Technology Vehicle costs with the Air Force.

In July 2004 the Air Force Requirements for Operational Capabilities Council (AFROCC) reviewed the ORS Analysis of Alternatives (AoA), and approved the following recommendations: (1.) Leverage lessons learned from AF-DARPA Falcon demo (2.) Conduct Architecture Studies -- Responsive spacecraft: size and functions study, -- Integration and technology needs (3.) Pursue a Hybrid (part reusable, part expendable) launch vehicle: spiral development approach, Step one: Small scale hybrid integration demonstrator, Step two: Full scale operational hybrid demonstrator, Step three: Vehicle production /operations. The AoA evolutionary approach begins with a starting point Hybrid Demonstrator to reduce risk and uncertainties.

In FY 2006 Congress added funds to conduct operational, technical, and economic analysis of Near Space vehicle design, development, and operational architectures. Near Space provides a persistent, responsive and dedicated capability to perform reconnaissance, communications, electronic warfare, and other missions.

This program is Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0604855F Operationally Responsive Launch

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	33.068	23.480	35.504
(U)	Current PBR/President's Budget	32.142	38.519	0.000
(U)	Total Adjustments	-0.926	15.039	
(U)	Congressional Program Reductions		-0.004	
	Congressional Rescissions	-0.025	-0.557	
	Congressional Increases		15.600	
	Reprogrammings			
	SBIR/STTR Transfer	-0.901		

(U) Significant Program Changes:

FY06: Congressional increases of +$7.8M for TacSat launch, +$5.7M for TacSat demos, and +$2.1M for Near Space analysis.

FY07: This PE is being closed and funding transfered to PE 0604857F, Operationally Responsive Space.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0604855F Operationally Responsive Launch	PROJECT NUMBER AND TITLE: A013 Small Launch Vehicle

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
A013	Small Launch Vehicle	32.142	38.519	0.000	0.000	0.000	0.000	0.000	0.000	87.686
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The 2002 Operationally Responsive Spacelift (ORS) Mission Needs Statement (MNS) established the requirement for responsive, on-demand access to, through and from space. This requirement encompasses the spacelift missions of delivering payloads to, or from, mission orbit and changing the orbit of existing systems to better satisfy new mission requirements. It also requires on-demand, flexible, and cost effective operations.

In December 2002 the DepSecDef directed the Air Force and the Defense Advanced Research Projects Agency (DARPA) to establish a joint program office to accelerate the Operationally Responsive Space (ORS) effort to meet portions of this requirement. This joint technology development program has been named Falcon and is focused on the development and transition of more mature technologies into a future weapon system capable of delivering and deploying conventional payloads worldwide from and through space such as Joint Warfighting Space satellites. Concept development, risk reduction and technology maturation are the key elements in the ORS program; and demonstrations, modeling and simulations are the critical tools. Although Falcon is a joint program, the Air Force is funding the ORS portion; DARPA is sharing the Hypersonic Technology Vehicle costs with the Air Force.

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In FY 2006 Congress added funds to conduct operational, technical, and economic analysis of Near Space vehicle design, development, and operational architectures. Near Space provides a persistent, responsive and dedicated capability to perform reconnaissance, communications, electronic warfare, and other missions.

This program is Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continued SLV system design and development, systems engineering and flight test planning for Phase II	22.196	17.300	
(U) Supported early demonstration flights and launch/test facilities evaluation and improvement	5.210	3.139	
(U) Performed analysis, costing and assess utility for operationally responsive space concepts/requirements and Program Management support	2.068	2.480	
(U) Blue MAJIC	1.778		
(U) Advanced Rocket Components	0.890		

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0604855F Operationally Responsive Launch	PROJECT NUMBER AND TITLE: A013 Small Launch Vehicle

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

		FY 2005	FY 2006	FY 2007
(U)	TacSat Launch		7.800	
(U)	Tactical Satellite Demonstrations		5.700	
(U)	Near Space analysis and program development		2.100	
(U)	Total Cost	32.142	38.519	0.000

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E, PE 0604857F, ORS (R-xx)			35.625	41.663	75.720	77.064	78.122	Continuing	TBD
(U)	AF RDT&E, PE 0604856F, CAV (R-xx)	16.053	26.993						Continuing	TBD
(U)	Defensewide RDT&E, DARPA, PE 0603285E, Falcon (R-xx)	12.500	40.000						Continuing	TBD
(U)	NASA funding provided to support multiple contractors	2.000								2.350

(U) D. Acquisition Strategy

Efforts will be executed by the joint AF/DARPA Falcon Program Office. Nine Phase I contracts were awarded in November 2003, Firm Fixed Price (FFP) with a duration of 6 months. An open competition was held for Phase II contracts in August 2004, resulting in four awards in September 2004 using an Other Transactions contract vehicle. At the completion of Phase II, a third phase will be considered to conduct additional developmental flight testing.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **04 Advanced Component Development and Prototypes (ACD&P)**

PE NUMBER AND TITLE: **0604855F Operationally Responsive Launch**

PROJECT NUMBER AND TITLE: **A013 Small Launch Vehicle**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Nine Phase I contractors	FFP	various	3.490								3.490	3.490
Phase II contractors:				2.000	Sep-05					Continuing	TBD	TBD
Air Launch	OTA	Reno, NV	4.140	5.573	Oct-04	17.300	Oct-05			Continuing	TBD	TBD
Lockheed Martin	OTA	New Orleans, LA		6.083	Oct-04					Continuing	TBD	TBD
Microcosm	OTA	El Segundo		4.540	Oct-04					Continuing	TBD	TBD
Space-X	OTA	El Segundo	4.000	4.000	Oct-04					Continuing	TBD	TBD
TBD Phase III contractors	TBD	TBD								Continuing	TBD	TBD
Hybrid Design and Development	TBD	TBD									0.000	
Near Space analysis and program development	TBD	TBD				2.100	May-06				2.100	
Subtotal Product Development			11.630	22.196		19.400		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Test Stand 2A Modification	MIPR	Edwards AFB, CA		3.804	Jan-05						3.804	3.804
Range Services	MIPR	Army-Huntsville, AL		1.406	Mar-05					Continuing	TBD	TBD
Flight Demo Support	MIPR	various	6.254			3.139	Oct-05			Continuing	TBD	TBD
SLC-3W Modification	MIPR	Naval Research Lab/Wash DC	1.700								1.700	1.700
Blue MAJIC	CPFF	Sparta, Lake Forest CA		1.778	Mar-05						1.778	2.000
Advanced Rocket Components	SBIR	Rocket Prop. Eng., Mojave CA		0.890	Jan-06						0.890	1.000
TacSat Launch	TBD	SMC Det 12/RP/Kirtland AFB NM				7.800	May-06				7.800	
TacSat Demonstrations	TBD	SMC Det 12/RP/Kirtland AFB NM				5.700	May-06				5.700	
Subtotal Test & Evaluation			7.954	7.878		16.639		0.000		Continuing	TBD	TBD
Remarks:												
(U) Development Support and Management												
Perform analysis and assess alternative concepts/requirements & program support	various	various	1.960	2.068	Oct-04	2.480	Oct-05			Continuing	TBD	TBD
Subtotal Development Support and Management			1.960	2.068		2.480		0.000		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2006
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0604855F Operationally Responsive Launch	PROJECT NUMBER AND TITLE: A013 Small Launch Vehicle	

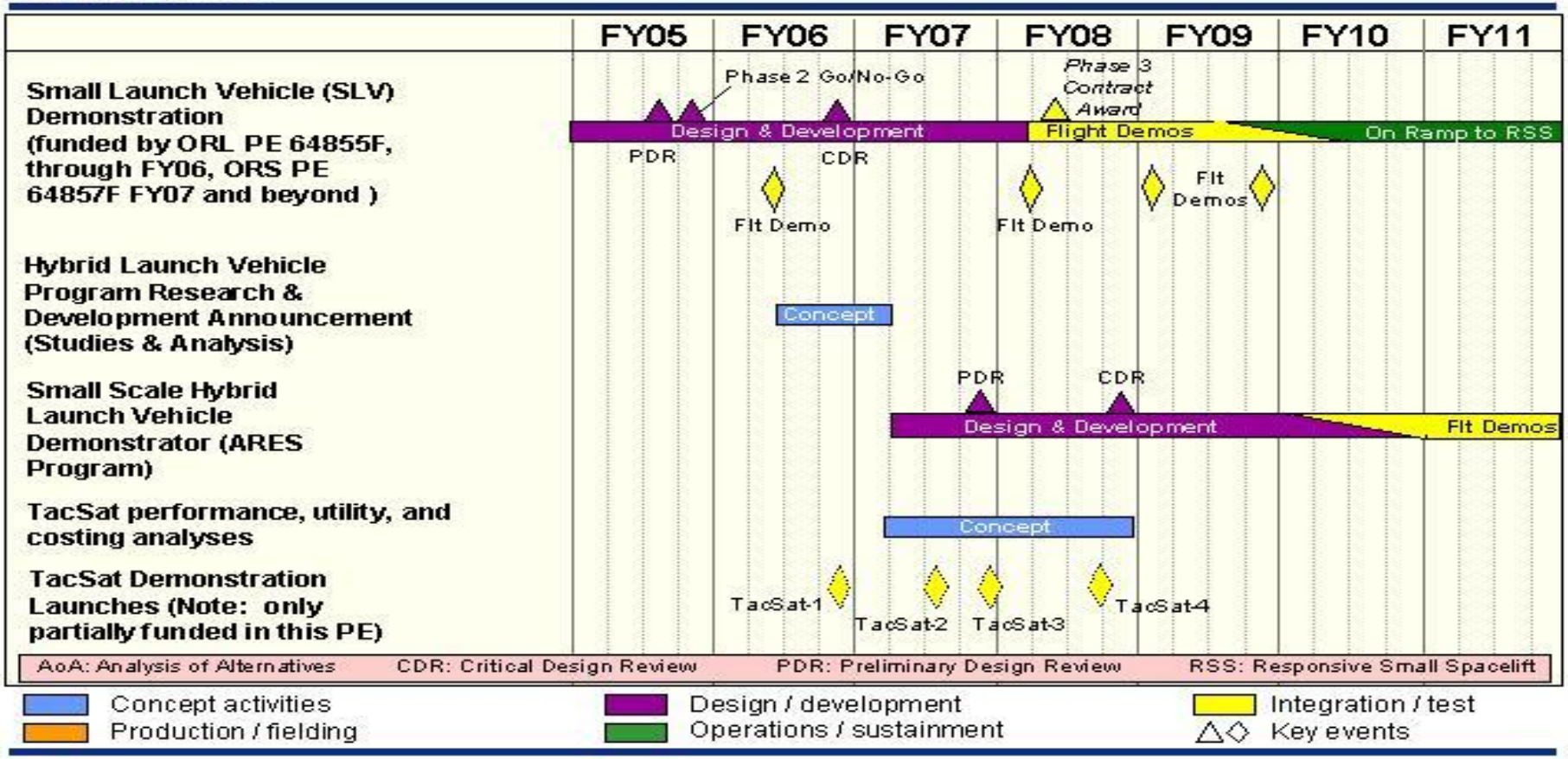
Remarks:

(U) Total Cost	21.544	32.142	38.519	0.000	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0604855F Operationally Responsive Launch	PROJECT NUMBER AND TITLE A013 Small Launch Vehicle

U.S. AIR FORCE

ORS Schedule



FY07 Staffer Brief

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **04 Advanced Component Development and Prototypes (ACD&P)**	PE NUMBER AND TITLE **0604855F Operationally Responsive Launch**	PROJECT NUMBER AND TITLE **A013 Small Launch Vehicle**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Phase II Preliminary Design Review	3Q		
(U) Phase II Flight Demo		2Q	
(U) Phase II Critical Design Review		4Q	
(U) TacSat-1 Launch		4Q	