

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE June 2001		
BUDGET ACTIVITY 03 - Advanced Technology Development				PE NUMBER AND TITLE 0603876F Space Based Laser					PROJECT 4779		
COST (\$ in Thousands)		FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
4779	Space Based Laser	68,926	72,544	0	0	0	0	0	0	0	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

All Air Force funding for this PE has been transferred to BMDO.

(U) **A. Mission Description**
 The Space Based Laser (SBL) project was created to investigate the feasibility of providing the nation with a highly effective, continuous, global boost phase intercept option for both national and theater missile defense. An SBL system could defend against missiles without putting the lives of US military personnel at risk. The possible speed of light defense allows for boost phase intercept at the earliest possible moment, offering the highest probability that intercepted missile fragments (possibly containing active chemical/biological or nuclear materials) will fall within the attacker's territory rather than defended territory. The SBL system could also provide many ancillary mission capabilities, including space control, air defense, global surveillance, and target detection and designation. Beginning with the FY02 budget, all SBL activities and associated funding are transferred to BMDO.

The SBL project is structured to research the feasibility and operational contribution of performing boost phase missile defense from space. The Ballistic Missile Defense Organization (BMDO) directed energy program (Project 1360, PE 0603173C in FY 2000, PE 0603174C in FY 2001 and out) has been addressing several key critical technology issues, such as the Hydrogen Fluoride laser performance and modeling; optics experiments; laser and optics integration; and Acquisition, Tracking, Pointing, and Fire Control (ATP/FC) tests. The combined AF/BMDO budget ends with FY01 funding and for FY02 and out, all funds transfer to BMDO who continues to fund through space flight testing. The Integrated Flight Experiment (IFX) is a critical step in proving the feasibility of destroying ballistic missiles in their boost phase from space.

Technology risk reduction and component demonstration prior to flight hardware development are important parts of the IFX program. Ground experiments will demonstrate major risk area engineering design units (gain generator, resonator, beam control). The IFX will culminate in the space vehicle integration, performance of a series of on-orbit experiments, and demonstration of SBL boost phase intercept feasibility.

The Air Force contributed funds to the Space Based Laser project from FY 1999 - FY 2001. This project is classified as Budget Activity 3 because the Integrated Flight Experiment (IFX) is a technology experiment.

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(U) A. Mission Description Continued				
(U) <u>FY 2000 (\$ in Thousands)</u>				
(U) \$61,763	Began IFX Development			
(U) \$581	Began Architecture & Affordability Study			
(U) \$750	Began Advanced Mirror System Development			
(U) \$457	Began Lethality, Analysis & Architecture (AFSPC and AFRL efforts)			
(U) \$5,375	Provided IFX Program Support			
(U) \$68,926	Total			
(U) <u>FY 2001 (\$ in Thousands)</u>				
(U) \$64,844	Continue IFX Development			
(U) \$500	Continue Advanced Mirror System Development			
(U) \$250	continue Lethality, Analysis & Architecture (AFSPC and AFRL efforts)			
(U) \$6,950	Provide IFX Program Support			
(U) \$72,544	Total			
(U) <u>FY 2002 (\$ in Thousands)</u>				
(U) \$0	No activity			
(U) \$0	Total			
(U) B. Budget Activity Justification				
This PE is in Budget Activity 3 (Advanced Technology Development) because it is performing technology development and risk reduction activities on the path to an Integrated Flight Experiment (IFX).				
(U) C. Program Change Summary (\$ in Thousands)				
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2001 PBR)	72,864	63,216	63,141	TBD
(U) Appropriated Value	73,840	73,216		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-576			
b. Small Business Innovative Research	-2,684			
c. Omnibus or Other Above Threshold Reprogram				
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(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u>				
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
d. Below Threshold Reprogram	-1,365	-159		
e. Rescissions	-289	-513		
(U) Adjustments to Budget Years Since FY 2001 PBR			-63,141	
(U) Current Budget Submit/FY 2002 PBR	68,926	72,544	0	TBD
(U) <u>Significant Program Changes:</u>				
	FY00: \$875K in Below Threshold Reprogrammings was executed to support higher priority Air Force efforts.			
	FY01: \$10M congressional add in FY 2001 to support acceleration of the IFX and its integrated test facility (included under IFX development).			
	FY02 and out: All funds transferred toBMDO			
(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u>				
(U) RDT&E, BMDO, R-29, Support Technologies-Adv Tech Dev				
(U) <u>E. Acquisition Strategy</u>				
Not Required				
(U) <u>F. Schedule Profile</u>				
Not Required				