

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
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BUDGET ACTIVITY 3 - Advanced Technology Development	PE NUMBER AND TITLE 0603707F Weather Systems Technology	PROJECT 2688
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COST (\$ In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
2688 Weather Support Technology	1,869	1,564	0	0	0	0	0	0	0	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

Note: This project will be terminated at the end of FY 1999.

(U) A. Mission Description: This Advanced Technology Development program demonstrates and transitions new technologies for warfighters and their associated weather support forces to enable full spectrum dominance. Technologies developed include new impact decision aids that will be incorporated into automated mission planning systems to optimize tactics and precision guided munitions selection. Other technologies will support operational laser system design and operational concept development. Initiatives are also planned to improve the accuracy of environmental forecasts produced by the Air Force Weather Agency and Air Force Space Command. Technologies delivered will enhance information superiority by improving tailored weather forecasts in data denied areas. Other models will enhance satellite survivability by improving space environmental forecasts.

(U) FY 1998 (\$ in Thousands):

- (U) \$500 Developed and delivered Night Vision Goggle Operations Weather Software Version 4.0 to Air Force Special Operations Command (AFSOC) and Air Combat Command (ACC) for evaluation. Software improves flight safety by predicting changes in goggle detection ranges due to night illumination and weather.
- (U) \$709 Transitioned infrared scene visualization system to the Air Force Mission Support System Program Office at Electronic Systems Center for planning sorties employing infrared guided munitions.
- (U) \$319 Initiated development of new target acquisition software and mission impact modules for calculating impact of weather on electro-optical weapon and navigation systems.
- (U) \$246 Delivered validated thunderstorm, aircraft icing, and turbulence algorithms to Air Force Weather Agency (AFWA) for tailored operational forecasts of aviation hazards.
- (U) \$95 Developed and delivered module for Coupled Ionospheric-Thermospheric Forecast Model for predicting satellite communication outages to the Air Force Space Command.
- (U) \$1,869 Total

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<p>(U) <u>FY 1999 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$814 Develop and transition Target Acquisition Weather Software V1.0 to Air Combat Command (ACC). Software will be used in predicting impact of weather on precision guided munitions during mission execution planning. - (U) \$614 Develop and demonstrate software that incorporates the impact of weather on precision guided munitions during preparation of the Air Tasking Order (Weather Automated Mission Planning Software) to ACC. - (U) \$104 Transition, for operational use, upgraded software that incorporates ACC and Air Force Special Operations Command (AFSOC) feedback on performance of Night Vision Goggle Operations Weather Software. - (U) \$32 Identified as a source for SBIR. - (U) \$1,564 Total <p>(U) <u>FY 2000:</u> Not Applicable.</p> <p>(U) <u>FY 2001:</u> Not Applicable.</p> <p>(U) B. Budget Activity Justification: This program is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies for existing system upgrades and/or new system developments that have military utility and address warfighter needs.</p>		
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