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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>					PE 0305111F: <i>Weather Service</i>							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013[#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	29.977	29.048	24.667	-	24.667	31.681	30.842	29.774	30.309	Continuing	Continuing
672738: <i>Weather Service</i>	-	29.977	29.048	24.667	-	24.667	31.681	30.842	29.774	30.309	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, sustain, and enhance segments of the Air Force Weather Weapon System (AFWWS). Activities also include studies and analysis to support both current program planning and execution and future program planning. The AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for global battlespace situational awareness. The AFWWS supports worldwide operations of Air Force and Army warfighters, Special Operation Forces (SOF), and other government agencies with weather observing and forecasting capabilities at in-garrison and deployed locations as well as centralized, reach-back capabilities. Air Force Weather (AFW) programs align under the five capability areas of Weather Data Collection (WDC), Weather Data Analysis (WDA), Weather Forecasting, Product Tailoring/Warfighter Applications (PT/WA), and Weather Dissemination (presently relies on Commercial-off-the-Shelf products and so does not use RDT&E funding). Through this alignment, AFW ensures an integrated and systems-oriented approach to program management decisions. WDC provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide. WDA provides a net-centric infrastructure that assimilates worldwide sources of terrestrial and space weather data and produces decision-quality information for warfighters. Improved weather analysis of real-time information also supports DoD's role in transformation of the National Airspace System through the Next Generation Air Transportation System (NextGen) and enhances Air Force energy security plans. Weather Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution. Additionally, WDA and Forecasting capabilities will be expanded to integrate and exploit data from a new generation of environmental sensing satellites. PT/WA provides timely, local and regional target-scale weather information to operational commanders for a given Area of Responsibility, and at tactical levels, provides front-line weather information to warfighters in support of combat operations. PT/WA supports the 'train as you fight' concept by assuring fixed and deployable systems have a similar look and feel. FY14 funding will enhance current and develop new computations based on dual-polarization technology for improved severe weather detection and rainfall amount forecasting. During FY14, the weather data analysis capability will continue to develop incremental software enhancements and integrate improved analysis capabilities including processing of data from a new generation of environmental sensing satellites. In FY14, the program plans to continue development of software to integrate advanced terrestrial and space weather forecast capabilities to improve models for warfighter operations. In PT/WA program, the FY14 funding will continue developing software for warfighter tailoring and exploitation products and integrate regional and tactical weather systems with warfighter C4I systems. These efforts will enhance the availability and integration of weather information in multiple Wings, Squadrons, Air and Space Operations Centers, Army decision processes, ATC operations, and exploitation of weather at global, regional, and tactical levels.

Activities also include studies and analysis to support both current program planning and execution and future program planning.

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0305111F: Weather Service				
This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.						
B. Program Change Summary (\$ in Millions)		FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget		30.919	29.048	28.903	-	28.903
Current President's Budget		29.977	29.048	24.667	-	24.667
Total Adjustments		-0.942	0.000	-4.236	-	-4.236
• Congressional General Reductions		-	0.000			
• Congressional Directed Reductions		-	0.000			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		-	0.000			
• Congressional Directed Transfers		-	0.000			
• Reprogrammings		0.000	0.000			
• SBIR/STTR Transfer		-0.942	0.000			
• Other Adjustments		0.000	0.000	-4.236	-	-4.236
Change Summary Explanation						
FY14 funding decrease is due to higher Air Force priorities.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2012	FY 2013	FY 2014
Title: Weather Data Collection				0.075	0.339	0.342
Description: WDC provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide.						
FY 2012 Accomplishments: Developed improved software for ground-based space environmental sensing.						
FY 2013 Plans: Participating with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar.						
FY 2014 Plans: Will participate with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar.						
Title: Weather Data Analysis				3.805	2.748	2.704

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Description: WDA provides a net-centric infrastructure that assimilates worldwide sources of terrestrial and space weather data and produces decision-quality information for warfighters. FY 2012 Accomplishments: Continued incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites. FY 2013 Plans: Continuing incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites. FY 2014 Plans: Will continue incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.				
Title: Weather Forecasting Description: Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution. FY 2012 Accomplishments: Continued integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites. FY 2013 Plans: Continuing integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites. FY 2014 Plans: Will continue integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.		18.686	21.668	17.272
Title: Product Tailoring/Warfighter Applications Description: PT/WA provides timely, local and regional target-scale weather information to operational commanders for a given Area of Responsibility, and at tactical levels, provides front-line weather information to warfighters in support of combat operations. FY 2012 Accomplishments:		5.495	3.184	3.165

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C. Accomplishments/Planned Programs (\$ in Millions)									FY 2012	FY 2013	FY 2014
Continued software development and integration of regional and tactical weather systems and integration with warfighter C4I systems. FY 2013 Plans: Continuing software development and integration of regional and tactical weather systems and integration with warfighter C4I systems. FY 2014 Plans: Will continue software development and integration of regional and tactical weather systems and integration with warfighter C4I systems.											
Title: Program Management Administration Description: Program Management Administration activities to support System Program Office management and oversight. FY 2012 Accomplishments: Program Management Administration activities to support System Program Office management and oversight in FY12. FY 2013 Plans: Program Management Administration activities to support System Program Office management and oversight in FY13. FY 2014 Plans: Program Management Administration activities to support System Program Office management and oversight in FY14.									1.916	1.109	1.184
Accomplishments/Planned Programs Subtotals									29.977	29.048	24.667
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 833070: Weather Observation Forecast	16.360	17.864	17.166		17.166	16.493	16.899	21.313	21.697	Continuing	Continuing
• OPAF: BA07: Line Item # 837100: Tactical C-E Equipment	0.427	0.430	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPAF: BA07: Line Item # 838010: Comm Elect Mods	8.019	6.902	11.507		11.507	12.227	11.102	7.367	7.500	Continuing	Continuing
• OPAF: BA07: Line Item # 86190A: Spares and Repair Parts	1.642	1.770	1.366		1.366	2.082	2.029	1.891	1.925	Continuing	Continuing

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>					R-1 ITEM NOMENCLATURE PE 0305111F: <i>Weather Service</i>						
D. Other Program Funding Summary (\$ in Millions)											
	<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u> <u>Total Cost</u>
<u>Remarks</u>											
E. Acquisition Strategy AFWWS employs an incremental development strategy with a series of incremental Initial Operational Capabilities (IOCs) and software releases to enable rapid development and fielding of capabilities using full and open competition.											
F. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0305111F: Weather Service				PROJECT 672738: Weather Service					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development and integration of weather forecast software	C/CPAF	Northrop Grumman:Bellevue, NE	-	9.786	Jan 2012	10.793	Jan 2013	9.863	Jan 2014	-		9.863	Continuing	Continuing	TBD
Development and integration of weather analysis software	C/CPFF	Raytheon:Long Beach, CA	-	3.661	Sep 2012	2.534	May 2013	2.565	May 2014	-		2.565	Continuing	Continuing	TBD
Integrate weather systems with warfighter C4I systems	C/CPIF	Raytheon:Omaha, NE	-	4.217	Jun 2012	2.847	Apr 2013	2.807	Apr 2014	-		2.807	Continuing	Continuing	TBD
Improve numerical weather prediction	MIPR	NCAR:Boulder, CO	-	3.531	Feb 2012	6.845	Feb 2013	4.039	Feb 2014	-		4.039	Continuing	Continuing	TBD
Improve weather forecast capabilities	MIPR	NASA:Greenbelt, MD	-	0.908	Feb 2012	0.750	Feb 2013	0.700	Feb 2014	-		0.700	Continuing	Continuing	TBD
Various	Various	Various:Various,	-	5.351	Oct 2011	3.619	Feb 2013	3.012	Feb 2014	-		3.012	Continuing	Continuing	TBD
Subtotal			0.000	27.454		27.388		22.986		0.000		22.986			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	Various:,	-	0.607	Oct 2011	0.551	Oct 2012	0.497	Oct 2014	-		0.497	Continuing	Continuing	TBD
Subtotal			0.000	0.607		0.551		0.497		0.000		0.497			

UNCLASSIFIED

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Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration ESC	Various	ESC:Hanscom AFB, MA	-	1.881	Oct 2011	1.074	Oct 2013	1.149	Oct 2014	-		1.149	Continuing	Continuing	TBD
Program Management Administration DMSG	Various	DMSG:Los Angeles AFB, CA	-	0.035	Oct 2011	0.035	Oct 2012	0.035	Oct 2014	-		0.035	Continuing	Continuing	TBD
Subtotal			0.000	1.916		1.109		1.184		0.000		1.184			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	29.977		29.048		24.667		0.000		24.667			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305111F: Weather Service

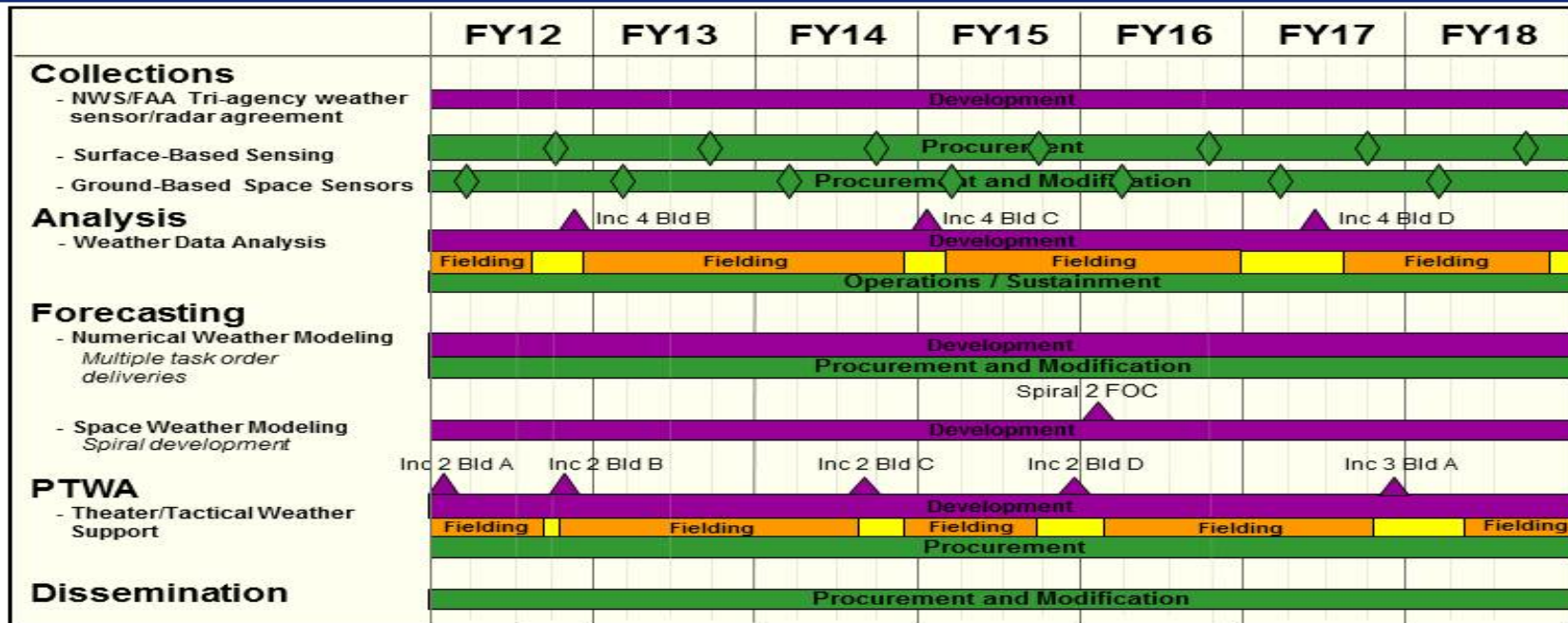
PROJECT

672738: Weather Service



U.S. AIR FORCE

Weather Services Schedule



Concept activities
Production / fielding

Key events & Annual Purchase Contr.
Operations / sustainment

Integration / test
Design / development

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305111F: <i>Weather Service</i>	PROJECT 672738: <i>Weather Service</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Collections -- National Weather Service/Federal Aviation Administration (NWS/FAA) Tri-agency weather sensor/radar agreement	1	2012	4	2018
Collections -- Surface-Based Sensing	1	2012	4	2018
Collections -- Ground-Based Space Sensors	1	2012	4	2018
Analysis -- Weather Data Analysis	1	2012	1	2015
Weather Data Analysis Increment 4 Build B Delivery	4	2012	4	2012
Weather Data Analysis Increment 4 Build C Delivery	1	2015	1	2015
Weather Data Analysis Increment 4 Build D Delivery	2	2017	2	2017
Forecasting -- Numerical Weather Modeling	3	2012	3	2018
Forecasting -- Space Weather Modeling	1	2012	1	2018
Forecasting -- Space Weather Modeling Spiral 2 FOC	1	2016	1	2016
Product Tailoring/Warfighter Applications (PT/WA) -- Theater/Tactical Weather Support	1	2012	4	2018
PT/WA Increment 2 Build A Delivery	1	2012	1	2012
PT/WA Increment 2 Build B Delivery	4	2012	4	2012
PT/WA Increment 2 Build C Delivery	3	2014	3	2014
PT/WA Increment 2 Build D Delivery	4	2015	4	2015
PT/WA Increment 3 Build A Delivery	4	2017	4	2017
Dissemination	1	2012	4	2018