EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2006		
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7**				R-1 ITEM NOMENCLATURE PE 0305160N Defense Meteorological Satellite Program (Space)				
COST ($ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Total PE Cost	**5.958**	**9.985**	**7.307**	**20.641**	**21.711**	**19.414**	**19.943**	
0524 Navy METOC Support (Space)	**3.165**	**7.769**	**6.237**	**19.546**	**20.594**	**18.286**	**18.787**	
1452 Geosat Follow-on	**0.864**	**1.216**	**1.070**	**1.095**	**1.117**	**1.128**	**1.156**	
9999 Congressional Adds	**1.929**	**1.000**						

Quantity of RDT&E Articles

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program element supports the naval services' unique requirements in meteorological and oceanographic (METOC) space-based remote sensors. Navy participates in joint efforts to leverage national polar- orbiting and geostationary satellite programs to demonstrate and validate improved warfighter capabilities. These requirements include the need to insure a smooth transition from the current joint Defense Meteorological Satellite Program (DMSP) to the future National Polar-orbiting Operational Environmental Satellite System (NPOESS). NPOESS readiness and risk reduction preparations to develop hardware and software that will allow ground stations to receive, ingest and exploit the NPOESS Preparatory Project (NPP) data. Unique naval warfighter capabilities will be transitioned to NPOESS and planned upgrades to NPOESS. These requirements also include the development of alternatives and required capabilities to replace the Geodetic/geophysical Satellite (GEOSAT) Follow-On (GFO) satellite which was launched on February 10, 1998 and is nearing end of life. A replacement to GFO is required to ensure continued support to Naval operations.

These requirements include commitments to satellite, sensor, and operational demonstration/development activities as well as transition to fleet applications associated with four satellite programs: 1) The converged National Polar-orbiting Operational Environmental Satellite System (NPOESS), 2) the joint Defense Meteorological Satellite Program (DMSP), 3) the jointly funded Coriolis satellite which includes the Navy WindSat and Air Force SMEI (Solar Mass Injection Imager) instruments, and 4) the Geodetic/geophysical Satellite (GEOSAT) Follow-On (GFO) funded entirely by Navy. GFO altimeter data are used to observe significant wave height, ocean thermal and acoustic structure. The Navy METOC Support (Space) project provides for Navy participation in Navy/Air Force cooperative efforts leading to DMSP sensor development, specifically participation in the calibration and validation of instruments and delivery of satellite products to the Fleet. The passive microwave instruments carried on DMSP and future NPOESS satellites provide global oceanic and atmospheric data of direct operational relevance, including sea surface wind, sea ice, and precipitation. WindSat is a partnered program that meets multiple Naval remote sensing requirements and provides a significant risk reduction for the NPOESS satellites' Conical Microwave Imaging Sensor (CMIS) instrument. Congressional Adds for a Radiation Hardened Vector Processor system to advance the science of spacecraft based data and imagery processing were provided in FY04 and FY05. Both the GEOSAT and Navy METOC Support (Space) projects fulfill Navy's obligation to develop naval service-unique, mission critical space-based METOC technology.

This budget reflects changes in investment line description beginning in FY07. This change supports acquisition and development investment lines that support the vision, operations concept, and capability requirements. Changes consolidate and better define RDT&E efforts as well as better reflect the new Commander Naval Meteorological and Oceanographic Command (CNMOC) reorganization.

FY06 includes Congressional Add for the Radiation Hardened Vector Processor (RHVP) project. RHVP will enable signal processing to be performed onboard a satellite rather than on the ground, reducing the bandwidth requirements of the downlink and increasing the information content of data that can be provided by a satellite payload. Radiation hardening for on-orbit processing of imagery and sensor data is a critical technology needed by ongoing Navy and national satellite programs. In FY06, demonstrate application of scalable/configurable architecture to specific DoD Future Space programs.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: BA-7: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it encompasses engineering and manufacturing development for upgrade of existing, operational systems.

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7**	R-1 ITEM NOMENCLATURE PE 0305160N Defense Meteorological Satellite Program (Space)

(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2005	FY 2006	FY 2007
FY06 President's Budget	6.084	9.122	11.492
FY07 President's Budget	5.958	9.985	7.307
Total Adjustments	(0.126)	0.863	(4.185)
Summary of Adjustments			
FORCENET Space METOC Reduction	0	0	-4
Contract Support Reduction	0	0	-0.141
NWCF Civpers Efficiencies	0	0	-0.079
Small Business Innovation Research (SBIR) Tax	-0.120	0	0
Nuclear Physical Security	0.001	0	0
Inflation	0	0	0.033
CIVPERS Pay Raise Rate Changes	0	0	0.002
Sec. 8125: Revised Economic Assumptions	0	-0.042	0
Congressional Add	0	1.000	0
Congressional Action 1% Reduction	0	-0.095	0
Department of Energy Transfer	-0.005	0	0
Misc. Navy Adjustments	-0.002	0	0
Subtotal	(0.126)	0.863	(4.185)

(U) Schedule:

(U) Technical:
Not Applicable

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME	
RDT&E, N / BA-7	PE 305160N Defense Meteorological Satellite Program (Space)					0524 Navy METOC Support (Space)	

COST ($ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Project Cost	**3.165**	**7.769**	**6.237**	**19.546**	**20.594**	**18.286**	**18.787**	
RDT&E Articles Qty								

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Navy Meteorological and Oceanographic (METOC) Support (Space) project provides for the naval services' unique sensor development efforts (WindSat and Advanced Altimeters) and Navy participation in Defense Meteorological Satellite Program (DMSP) Special Sensor Microwave/Imager (SSM/I) and Special Sensor Microwave Imager Sounder (SSMIS) calibration efforts in support of the Fleet operational requirements. WindSat, an initiative begun in 1997, is a partnered program that meets multiple Naval remote sensing requirements and provides a significant risk reduction for the NPOESS satellites' Conical Microwave Imaging Sensor (CMIS) instrument. The passive microwave instruments carried on DMSP and future NPOESS satellites provide global oceanic and atmospheric data of direct operational relevance, including sea surface wind speed, sea ice, and precipitation. The Navy METOC Support (Space) project ensures the naval services' operational requirements are satisfied primarily through demonstration of technologies for inclusion on operational constellations such as DMSP, the National Polar-orbiting Operational Environmental Satellite System (NPOESS) and the National Oceanic and Atmospheric Administration's (NOAA) Geostationary Operational Environmental Satellites (GOES). These efforts fulfill naval service unique requirements that are not funded within the DMSP, NPOESS or GOES programs, and are in accordance with current inter-agency agreements. The project also provides for participation in efforts leading to operational improvements of satellite derived products and naval service participation as a voting member of the DMSP Configuration Control Board (CCB) and as a technical advisor to the NPOESS Joint Agency Requirements Group (JARG). Future funding plans respond to emerging Chief of Naval Operations requirements for Navy and Marine Corps METOC data.

This project reflects changes in investment line description beginning in FY07. This change supports acquisition and development investment lines that support the vision, operations concept, and capability requirements. Changes consolidate and better define RDT&E efforts as well as better reflect the new Commander Naval Meteorological and Oceanographic Command (CNMOC) reorganization.

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	PE 305160N Defense Meteorological Satellite Program (Space)	0524 Navy METOC Support (Space)

(U) B. Accomplishments/Planned Program

WINDSAT/Sensor/Observing Systems (Space)	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost	1.677	6.386	3.420	
RDT&E Articles Quantity				

FY05 - Controlled Coriolis Satellite and monitored health of WindSat on-orbit payload that provided fleet ocean wind speed and direction data. Performed sensor calibration and data validation of environmental algorithms generated for Fleet use.
FY06 - Develop additional warfighter products (e.g. sea surface temperature) from the existing Windsat data stream. Control Coriolis Satellite and monitor health of the WindSat on-orbit payload that provides fleet ocean wind speed and direction data. Perform sensor calibration and data validation of environmental algorithms generated for Fleet use.
FY07: Determine system design for advanced altimetry mission. Develop additional War fighter products (sea ice coverage); continue risk reduction to CMIS through WindSat data exploitation and control Coriolis and monitor state of health of the WindSat on-orbit payload. Monitor SSMIS performance and continue calibration and validation. Prepare for launch of F-18; Phase C Approval for Advanced Altimeter; Preliminary Design Review for Advanced Altimeter; GDPS update for sea ice; and F-17 SSMIS Cal/Val Final Report.

Calibration and Validation Activities/ Sensor/Observing Systems (Space)	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost	1.275	1.153		
RDT&E Articles Quantity				

FY05 - Prepared and supported launch of Defense Meteorological Satellite Program (DMSP) (F-17). Monitored performance of F-17's Special Sensor Microwave Imager Sounder (SSM/IS). Monitored SSM/I performance and continued calibration and validation support effort associated with the DMSP SSM/IS and WindSat sensor. Used Airborne Polarmetric Microwave Imaging Radiometer (APMIR) as an underflight resource for calibration/validation of Defense Meteorological Satellite Program (DMSP) Special Sensor Microwave/Imager (SSM/I) and Special Sensor Microwave Imager Sounder (SSM/IS) sensors.
FY06 - Complete validation report for F17. Monitor Special Sensor Microwave/Imager (SSM/I) performance and continue calibration and validation support effort associated with the Defense Meteorological Satellite Program (DMSP) Special Sensor Microwave Imager Sounder (SSM/IS) and WindSat sensor.
FY07 - Efforts incorporated into the "Sensors/Observation Systems (Space)" investment line.

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2006
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-7	PE 305160N Defense Meteorological Satellite Program (Space)	0524 Navy METOC Support (Space)	

(U) B. Accomplishments/Planned Program

Advanced Altimeter/ Sensors/Observing Systems (Space)	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost	0.213	0.230		
RDT&E Articles Quantity				

FY05 - Completed support of Advanced Altimeter program development and trade studies.
FY06 - Perform Analysis of Alternatives including investigating the Centre Nationale Etudes Spatiale's (CNES) Altimeter Ka band (AltiKa) for littoral region application. Begin concept development and market research for Advanced Altimeter and future sensors.
FY07 - Efforts incorporated into the "Sensors/Observation Systems (Space)" investment line.

Assim/Prediction Models (Atm/Ocn)	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost			2.817	
RDT&E Articles Quantity				

FY07 - Deliver initial set of advanced NPP/NPOESS data assimilation algorithms. Conduct test and evaluation of these algorithms with NPP data.

R-1 SHOPPING LIST - Item No.199

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	PE 305160N Defense Meteorological Satellite Program (Space)	0524 Navy METOC Support (Space)

(U) C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name

Not Applicable

(U) D. ACQUISITION STRATEGY: *

Naval service unique space based METOC requirements are not fully funded through Joint or converged national program plans. Particular sensors or data sources with unique naval service mission needs are targeted to accelerate acquisition or ensure threshold accomplishment. WindSat provides risk reduction data and developmental technology that the NPOESS IPO will use in the development of the Conical Microwave Imager Sounder (CMIS). CMIS will collect global microwave radiometry and sounding data to produce microwave imagery and other meteorological and oceanographic data. CMIS can be viewed as the follow-on instrument to the Special Sensor Microwave (SSM) instruments Navy developed for the Defense Meteorological Satellite Program (DSMP). It will be the primary instrument for satisfying 20 NPOESS Integrated Operational Requirements Document (IORD) Environmental Data Records (EDRs). These CMIS sensors will be acquired as part of the NPOESS architecture which supports these Navy requirements in the future. Maintenance of rigorous sensor calibration and data validation for operational SSM instruments continues along with algorithm development in support of fleet applications. The Advanced Altimeter technologies will improve radar altimeter resolution and arial coverage to support Navy requirements for sea surface topography measurement in the littorals.

(U) E. MAJOR PERFORMERS: **

FY05 - FY07 - Naval Research Laboratory, Washington D.C. 49% Satellite Mission and Technical Support, Sensor Calibration and Data Validation

*** Not required for Budget Activities 1,2,3, and 6**
**** Required for DON and OSD submit only.**

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2006**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**		PROGRAM ELEMENT PE 305160N Defense Meteorological Satellite Program (Space)			PROJECT NUMBER AND NAME 0524 Navy METOC Support (Space)							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Spacecraft Development	FF	Spectrum Astro, AZ	2.500								2.500	
Spacecraft Development	CP	TRW, Redondo Beach, CA	4.885								4.885	
Subtotal Product Development			7.385								7.385	
Windsat-Sensor/Observing Systems (Space)	CP	Various	75.630	2.436		6.386		3.420		Continuing	Continuing	
*IOMI PM and System Engineering	CP	Various	3.754								3.754	
*SSMIS Cal/Val	CP	Various	7.496	0.643		1.153		0.000		Continuing	Continuing	
*Future Mission Engineering	CP	Various		0.086		0.230		0.000		Continuing	Continuing	
*APMIR	CP	Various	1.590								1.590	
NPP/NPOESS Algorithms-Assimilation/Prediction Models (Atmosphere/Ocean)		NRLs						2.817		Continuing	Continuing	
Subtotal Support			88.470	3.165		7.769		6.237			5.344	
Total Cost			95.855	3.165		7.769		6.237			12.729	

Remarks:
*Indian Ocean METOC Imager (IOMI)
*Special Sensor Microwave Imager Sounder (SSMIS)
*Airborne Polarimetric Microwave Imaging Radiometer (APMIR)

Remarks: Future Mission Engineering will address Navy unique METOC requirements for littoral applications.

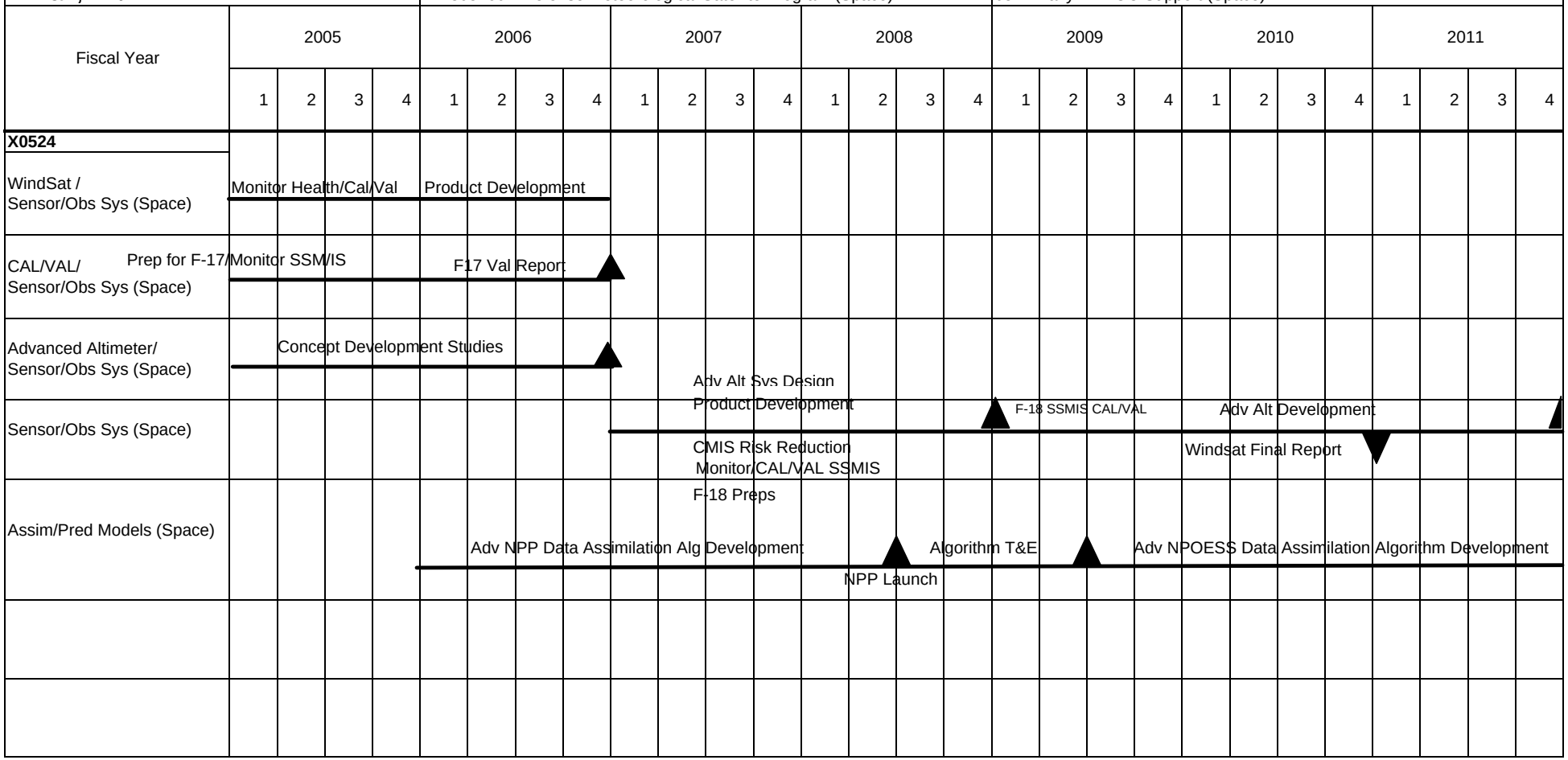
CLASSIFICATION:

EXHIBIT R4, Schedule Profile — DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-7**

PROGRAM ELEMENT NUMBER AND NAME: PE 305160N Defense Meteorological Satellite Program (Space)

PROJECT NUMBER AND NAME: 0524 Navy METOC Support (Space)



* Airborne Polarimetric Microwave Imaging Radiometer(APMIR) Underflights will be conducted as part of the Special Sensor Microwave Image Sounder (SSMIS) Calibration and Validation.

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E BA-7**	PROGRAM ELEMENT PE 305160N Defense Meteorological Satellite Program (Space)					PROJECT NUMBER AND NAME 0524 Navy METOC Support (Space)		
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
WindSat/Sensor/Obs Sys (Space)								
CAL/VAL/Sensor/Obs Sys (Space)		4Q						
Advanced Altimeter/Sensor/Obs Sys (Space)		4Q						
Sensor/Obs Sys (Space)				4Q		4Q	4Q	
Assim/Pred Models (Space)				2Q	2Q			

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305160N Navy Meteorological and Oceanographic Sensors - Space				PROJECT NUMBER AND NAME 1452 GEOSAT			
COST ($ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Project Cost	**0.864**	**1.216**	**1.070**	**1.095**	**1.117**	**1.128**	**1.156**	
RDT&E Articles Qty								

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project provides a satellite-borne radar altimeter sensor to obtain ocean topography measurements from which tactically significant features such as ocean fronts and eddies, wave heights, internal acoustic structure, and sea-ice edges are derived. Topography provides a unique and important data source in support of a number of naval service unique warfare areas such as anti-submarine and undersea warfare. GFO data are made freely available to other agencies such as the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA) who value its input to studies involving global warming and climate change including El Nino Southern Oscillation (ENSO) effects. Ocean topography data was previously provided by GEOSAT from 1985 until the satellite failed in January 1990. The GEOSAT Follow-On (GFO) satellite which was launched in February 1998 provides altimetry data until its end of life and if not replaced there will be a gap in altimetry coverage until an Advanced Altimeter or a National Polar-orbiting Operational Environmental Satellite System (NPOESS) altimeter is available.

This project reflects changes in investment line description beginning in FY07. This change supports acquisition and development investment lines that support the vision, operations concept, and capability requirements. Changes consolidate and better define RDT&E efforts as well as better reflect the new Commander Naval Meteorological and Oceanographic Command (CNMOC) reorganization.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA - 7	0305160N Navy Meteorological and Oceanographic Sensors - Space	1452 GEOSAT

(U) B. Accomplishments/Planned Program

Algorithm Development and Sensor Cal/Val/ Sensors/Observing Systems (Space)	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost	0.864	1.216	1.070	
RDT&E Articles Quantity				

FY05 - Assessed on-orbit system performance, conducted payload calibration and data validation, refined orbits and resolved performance anomalies.
FY06 - Investigate and implement life extension solutions (e.g. develop work arounds for degraded components). Assess on-orbit system performance, conduct payload calibration and data validation, refine orbits and resolve performance anomalies. Develop GFO metrics for warfighter applications.
FY07: Investigate and implement life extension solutions to work around for degraded components. Assess on-orbit system performance, calibrate payload and validate data, resolve anomalies. Assess impact of differing orbits on metric effectiveness. Complete GFO Performance Validation Reports (every 17 days) and GFO Engineering Anomaly Resolution Reports (upon retirement of anomaly). Complete MetOc metric end of year report.

	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305160N Navy Meteorological and Oceanographic Sensors - Space	1452 GEOSAT

(U) C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name

Not Applicable

(U) D. ACQUISITION STRATEGY:

The Naval services require a satellite-borne radar altimeter sensor on orbit to obtain ocean topography measurements from which tactically significant features such as ocean fronts and eddies, wave heights, internal acoustic structure, and sea-ice edges are derived. Rigorous payload calibration, data validation and precision orbit determination maintain accuracy and usefulness of data. Continued refinement of sensor performance works toward satisfying the Navy and Marine Corps' littoral data requirements. As the GeoSat Follow-On satellite reaches its end of life, the program will transition to satisfy naval service unique altimetry requirements through a free-flying Advanced Altimeter or a National Polar-orbiting Operational Environmental Satellite System (NPOESS) altimeter.

(U) E. MAJOR PERFORMERS:

FY05 to FY07 - Ball Aerospace, Boulder, CO 32% Satellite Mission Support; Computer Sciences Corporation (CSC), Monterey, CA 50% Sensor Calibration, Data Validation and Technical Support.

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)					DATE: **February 2006**							
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**		PROGRAM ELEMENT 0305160N Navy Meteorological and Oceanographic Sensors - Space					PROJECT NUMBER AND NAME 1452 GEOSAT					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Software Development	CP	Ball Aerospace	85.984		N/A		N/A		N/A		85.984	
		Various	8.045		N/A		N/A		N/A		8.045	
Subtotal Product Development			94.029								94.029	
Remarks:												
Systems Engineering	CP	Ball Aerospace	2.672	0.300	N/A	0.269	N/A	0.370	N/A	Continuing	Continuing	
		Various	1.556	0.564	N/A	0.947	N/A	0.700	N/A	Continuing	Continuing	
Subtotal Support			4.228	0.864		1.216		1.070			7.378	
Remarks:												
Total Cost			98.257	0.864		1.216		1.070			101.407	

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																												DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**					PROGRAM ELEMENT NUMBER AND NAME 0305160N Navy Meteorological and Oceanographic Sensors - Space												PROJECT NUMBER AND NAME 1452 GEOSAT												
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Algorithm Development/ Sensor/Obs Systems (Space)		Cal/Val				GFO Metrics ▲					Life Extension Solutions			▲				Metric Assessment of OSTM					▲					
																						Execute GFO Life Extension Solutions						

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT 0305160N Navy Meteorological and Oceanographic Sensors - Space					PROJECT NUMBER AND NAME 1452 GEOSAT		
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Algorithm Development/Sensor/Obs Systems (Space)		4Q		4Q		4Q		

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305160N Navy Meteorological and Oceanographic Sensors - Space				PROJECT NUMBER AND NAME 9999 Congressional Adds			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost		**1.929**	**1.000**					
9999 Radiation Hardened Vector		**1.929**	**1.000**					
RDT&E Articles Qty								

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Congressional Add for the Radiation Hardened Vector Processor (RHVP) project will enable signal processing to be performed onboard a satellite rather than on the ground, reducing the bandwidth requirements of the downlink and increasing the information content of data that can be provided by a satellite payload. Radiation hardening for on-orbit processing of imagery and sensor data is a critical technology needed by ongoing Navy and national satellite programs.

FY05 supported the development of Scalable Signal Processing Architecture to provide a dynamic solution for spacecraft based data and imagery processing. In FY06, demonstrate application of scalable/configurable architecture to specific DoD Future Space programs.

R-1 SHOPPING LIST - Item No. 199

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA - 7	0305160N Navy Meteorological and Oceanographic Sensors - Space	9999 Congressional Adds

(U) B. Accomplishments/Planned Program

9282 Radiation Hardened Vector/Scalable Signal Processor Archite	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost	1.929	1.000		
RDT&E Articles Quantity				

FY05 - Developed and demonstrated scalable/reconfigurable architecture.
FY06 - Demonstration application of scalable/configurable architecture to specific DoD Future Space programs.

	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

R-1 SHOPPING LIST - Item No. 199