

RFP F04701-03-R-0201

ATTACHMENT 7

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ATTACHMENT 7

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1 Core Operations

SOW Paragraph		1 ARGOS VOF	2 TSX-5 VOF
3	PROGRAM MANAGEMENT		
3.1.2	Cost Management		
3.1.2.1	Maintain a CWBS		
3.1.2.2	Prepare cost estimates		
3.1.2.3	Maintain an Integrated Schedule		
3.1.2.4	Manage travel budgets		
3.1.2.5	Provide reports and informal reviews		
3.1.3	Information Management		
3.1.3.1	Maintain documents		
3.1.3.2	Maintain documentation on servers		
3.1.3.3	Use an information management system		
4	PROGRAM PLANNING		
4.1.1	Track resources		
4.1.1.1	Provide appropriate representation		
4.1.2	Perform analysis on ground system loading		
4.1.3	Analyze the capabilities and limitations		
6	MISSION READINESS		
6.1	CORE OPERATIONS		
7	OPERATIONS SUPPORT		
7.1.1	Provide for flexibility to support operations		
7.1.2	Documentation products		
7.1.3	Implement anomaly response plans		
7.1.4	Perform long-term trending of vehicle telemetry		
7.1.5	Perform mission and pre-pass planning		
7.1.6	Perform real-time evaluation		
7.1.6.1	Perform real-time trending analysis		
7.1.6.2	Provide initial troubleshooting		
7.1.7	Issue all commands		
7.1.8	Conduct post-pass critiques		
7.1.9	Maintain daily activity logs		
7.1.9.1	Maintain data		
7.1.9.2	Provide anomaly and end-of-mission reports		
7.1.10	Perform operational testing		

		1	2
		ARGOS VOF	TSX-5 VOF
Core Operations			
SOW Paragraph			
8	ENGINEERING DEVELOPMENT		
8.1.1	Mission-Unique Software		
8.1.1.1	Develop and follow standard processes		
8.1.1.2	For core software upgrades, perform conversions		
8.1.1.3	Perform system administration functions		
8.1.1.3.1	Install and maintain Mission Unique Software		
8.1.1.3.2	Perform configuration management		
8.1.1.3.3	Perform housekeeping functions		
8.1.2	System Architecture		
8.1.2.1	Provide operations expertise		
8.1.2.2	Perform operational evaluation		
8.1.2.3	Provide lessons learned		
9	TECHNICAL TRAINING		
9.1.1	Technical training program		
9.1.1.1	Periodically train, evaluate, and recertify		
9.1.1.2	Maintain training records		
9.1.1.3	Maintain training materials		
9.1.2	Obtain current training		
9.1.3	Provide training to government personnel		
9.1.3.1	Provide opportunity for government attendance		
9.1.3.2	Provide orientation training as required		
10	S/IA SUPPORT		
10.1.1	Review and comment on S/IA		
10.1.1.1	Computer security		
10.1.1.2	Acquisition systems protection		
10.1.2	Participate in S/IA activities		
10.1.3	Physical security		

1.1 Advanced Research & Global Observation Satellite (ARGOS)

1.1.1 BACKGROUND

ARGOS is the largest STP R&D satellite mission, at one time supporting nine experiments with 31 science objectives. ARGOS was launched on a Delta II launch vehicle on 23 Feb 99 into an 855Km circular orbit (98.7 deg inclination). The satellite had a one-year mission design life with a 3-year operations goal. The RSC continues to operate ARGOS via the AFSCN.

1.1.2 OBJECTIVE

The RSC continues to operate ARGOS in the TACO (Test and Checkout) mode; only 1 gyro continues to operate and the vehicle is in a sun-safe configuration.

1.1.3 MILESTONES

1.1.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

1.1.3.2 Program

Perform operations from 1 Oct 03 through 30 Sep 04.

1.1.4 WORK REQUIRED DURING TRANSITION

1.1.4.1 Program Management

Perform all highlighted SOW tasks. Prepare a cost estimate for FY04.

1.1.4.2 Program Planning

Perform all highlighted SOW tasks.

1.1.4.3 Concept Development

Not Applicable

1.1.4.4 Mission Readiness

Not Applicable

1.1.4.5 Operations Support

Perform all highlighted SOW tasks. Plan for 30 contacts per week.

1.1.4.6 Engineering Development

Perform all highlighted SOW tasks. Due to limited ARGOS operations, and the maturity of ARGOS software, do not plan on any modifications to existing software and databases. Apply corporate expertise, as well as knowledge obtained from ARGOS operations, in performing SOW paragraph 8.1.2.

1.1.4.7 Technical Training

Perform all highlighted SOW tasks.

1.1.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

1.2 *Tri-Service Experiment Number 5 (TSX 5)*

1.2.1 BACKGROUND

TSX-5 was launched on a Pegasus XL launch vehicle on 7 Jun 00 into a 408Km x 1710Km elliptical orbit (69 deg inclination). The satellite had a 6-month mission design life with a one-year operations goal, supporting two major experiments: Space Technology Research Vehicle (STRV-2) and Compact Environmental Anomaly Sensor (CEASE). The RSC continues to operate TSX-5 via the AFSCN and only provides data to the CEASE customer at this time.

1.2.2 OBJECTIVE

The RSC continues to operate TSX-5 in the TACO (Test and Checkout) mode.

1.2.3 MILESTONES

1.2.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

1.2.3.2 Program

Perform Operations from 1 Oct 03 through 30 Sep 04.

1.2.4 WORK REQUIRED DURING TRANSITION

1.2.4.1 Program Management

Perform all highlighted SOW tasks. Prepare a cost estimate for FY04.

1.2.4.2 Program Planning

Perform all highlighted SOW tasks.

1.2.4.3 Concept Development

Not Applicable

1.2.4.4 Mission Readiness

Not Applicable

1.2.4.5 Operations Support

Perform all highlighted SOW tasks. Plan for 24 contacts per week.

1.2.4.6 Engineering Development

Perform all highlighted SOW tasks. Due to limited TSX-5 operations, and the maturity of TSX-5 software, do not plan on any modifications to existing software and databases. Apply corporate expertise, as well as knowledge obtained from TSX-5 operations, in performing SOW paragraph 8.1.2.

1.2.4.7 Technical Training

Perform all highlighted SOW tasks.

1.2.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2 Customer Workload

SOW Paragraph		1	2	3	4	5	6	7	8	9	10	11	12
		VOF	VOC	VOF	VOF	VOF	VOC	VOC	VOC	VOC	VOC	VOF	VOF
		Booster-C	Booster-G	CloudSat	C/NOFS	Coriolis	DTB	DSCS	DSP	ISAS	POAM III	STPSat-1	XSS-11
3	PROGRAM MANAGEMENT												
3.2.1	Cost Management												
3.2.1.1	Maintain a CWBS												
3.2.1.2	Prepare cost estimates												
3.2.1.3	Maintain an Integrated Schedule												
3.2.1.4	Manage travel budgets												
3.2.1.5	Provide reports and informal reviews												
3.2.1.6	Provide customer briefings and written reports												
3.2.2	Information Management												
3.2.2.1	Maintain documents												
3.2.2.2	Maintain documentation on servers												
3.2.2.3	Use an information management system												
4	PROGRAM PLANNING												
4.2.1	Track resources												
4.2.1.1	Provide appropriate representation												
4.2.2	Assist in developing mission requirements												
4.2.3	Analyze requirements												
4.2.4	Identify potential risks												
5	CONCEPT DEVELOPMENT												
5.2.1	Perform risk-reduction and proof-of-concept												
5.2.2	Support evaluation of concepts												
5.2.3	Originate new concepts												
5.2.4	Support transition of concepts												
6	MISSION READINESS												
6.2.1	Participate in and support activities												
6.2.2	Prepare/review mission-specific documentation												
6.2.2.1	Develop procedures												
6.2.2.2	Develop anomaly response plans												
6.2.3	Mission specific exercises												
7	OPERATIONS SUPPORT												
7.2.1	Documentation products												
7.2.2	Implement anomaly response plans												
7.2.3	Perform long-term trending												
7.2.4	Perform mission and pre-pass planning												

Customer Workload		1	2	3	4	5	6	7	8	9	10	11	12
		Booster-C VOF	Booster-G VOC	Cloud Sat VOF	C/NOFS VOF	Coriolis VOF	DTB VOC	DSCS VOC	DSP VOC	ISAS VOC	POAM III VOF	STPSat-1 VOF	XSS-11 VOF
SOW Paragraph													
7.2.5	Perform real-time evaluation												
7.2.5.1	Perform real-time trending analysis												
7.2.5.2	Provide initial troubleshooting												
7.2.6	Issue all commands												
7.2.7	Conduct post-pass critiques												
7.2.8	Validate data quality												
7.2.9	Maintain daily activity logs												
7.2.9.1	Maintain data												
7.2.9.2	Provide anomaly and end-of-mission reports												
7.2.10	Perform operational testing												
8	ENGINEERING DEVELOPMENT												
8.2.1	Follow standard processes												
8.2.2	Recommend mission-unique solutions												
8.2.3	Perform developmental testing												
8.2.4	Perform system administration functions												
8.2.4.1	Install and maintain MUS												
8.2.4.2	Perform configuration management												
8.2.4.3	Perform housekeeping functions												
8.2.4.4	Establish accounts/mission related directories												
9	TECHNICAL TRAINING												
9.2.1	Technical training program												
9.2.1.1	Initially train, evaluate, and certify personnel												
9.2.1.2	Periodically train, evaluate, and recertify												
9.2.1.3	Maintain training records												
9.2.1.4	Maintain training materials												
9.2.2	Obtain current training												
9.2.3	Provide training to government personnel												
9.2.3.1	Provide opportunity for government attendance												
9.2.3.2	Provide orientation training as required												
9.2.3.3	Initially train government personnel												
10	S/IA SUPPORT												
10.2.1	Review and comment on S/IA												
10.2.1.1	Computer security												
10.2.1.2	Acquisition systems protection												
10.2.2	Participate in S/IA activities												
10.2.3	Physical security												

2.1 Booster Support for Commercial Launches (Booster-C)

2.1.1 BACKGROUND

SMC Det 12/VO conducts booster operations from lift-off until satellite separation. The operations center acts as a bent-pipe for booster telemetry data.

2.1.2 OBJECTIVE

Provide AFSCN telemetry coverage for the Delta II and EELV boosters during the lift phase.

2.1.3 MILESTONES

2.1.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.1.3.2 Program

Perform Operations from 1 Oct 03 through 30 Sep 04.

2.1.4 WORK REQUIRED DURING TRANSITION

2.1.4.1 Program Management

Perform all highlighted SOW tasks. Prepare a cost estimate for FY04.

Attend six coordination meetings – up to four people for half a day meetings.

2.1.4.2 Program Planning

Perform all highlighted SOW tasks.

2.1.4.3 Concept Development

Not Applicable

2.1.4.4 Mission Readiness

Highlighted SOW tasks are applicable in accordance with the following:

- a. Rehearsals
 - 2 rehearsals for each mission – simulation of launch to configure and actively test system functionality
 - Slave bus testing and antenna angle comparisons
 - Data flow tests from the Remote Ground Station (RGS)

- Full rehearsal within 24 hrs of launch (unless designated otherwise by customer)
- b. Orbit Analysis
 - Trajectory and software analysis configuration prior to launch
 - Angle file comparison with Best Estimated Trajectory (BET) file

2.1.4.5 Operations Support

Highlighted SOW tasks are applicable in accordance with the following:

- a. Pass Support
 - Support as required by customer – includes console operations and interaction with customer as required
 - Post-pass documentation
 - Respond to ground system errors
- b. Orbit Analysis
 - Generate antenna pointing angles for slewing RGS antenna
 - Post launch analysis

2.1.4.6 Engineering Development

Minimal support will be required for this mission during transition.

2.1.4.7 Technical Training

Highlighted SOW tasks are applicable in accordance with the following:

- a. Train MCs and OAs – initial training and training for each subsequent launch
- b. Develop training plan to include self-training and recurring training for launch ops crew

2.1.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.2 *Booster Support for Government Launches (Booster-G)*

2.2.1 BACKGROUND

SMC Det 12/VO conducts booster operations from lift-off until satellite separation. The operations center acts as a bent-pipe for booster telemetry data.

2.2.2 OBJECTIVE

Provide AFSCN telemetry coverage for the Delta II and EELV boosters during the lift

phase.

2.2.3 MILESTONES

2.2.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.2.3.2 Program

Perform Operations from 1 Oct 03 through 30 Sep 04.

2.2.4 WORK REQUIRED DURING TRANSITION

2.2.4.1 Program Management

Perform all highlighted SOW tasks. Prepare a cost estimate for FY04. Attend six coordination meetings – up to two people for half a day meetings.

2.2.4.2 Program Planning:

Perform all highlighted SOW tasks.

2.2.4.3 Concept Development

Not Applicable

2.2.4.4 Mission Readiness

Highlighted SOW tasks are applicable in accordance with the following:

- a. Rehearsals
 - 2 rehearsals for each mission – requires OA support for slave bus testing and antenna angle comparisons
 - OA support for full rehearsal within 24 hrs of launch (unless designated otherwise by customer)
- b. Orbit Analysis
 - Trajectory and software analysis configuration prior to launch
 - Angle file comparison with Best Estimated Trajectory (BET) file

2.2.4.5 Operations Support

Highlighted SOW tasks are applicable in accordance with the following:

- a. Pass Support
 - Ground system support as required

b. Orbit Analysis

- Generate antenna pointing angles for slewing RGS antenna
- Post launch analysis

2.2.4.6 Engineering Development

Highlighted SOW tasks are applicable in accordance with the following:

a. Ground System Maintenance

- Maintain mission database for each launch support operation
- Respond to OA requests for improving/building analysis tools as required

2.2.4.7 Technical Training

Highlighted SOW tasks are applicable in accordance with the following:

- a. Train OAs – initial training and training for each subsequent launch
- b. Provide updated training documentation resulting from system upgrades needed by the launch ops crew

2.2.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.3 CloudSat

2.3.1 BACKGROUND

The CloudSat spacecraft is a version of the Ball Aerospace RS-2000 commercial line. CloudSat will be launched with CALIPSO in October 2004 on a Delta launch vehicle. Det 12/VO will be performing Mission Unique Software (MUS) development, mission readiness, mission planning, on-orbit operations, maneuver planning, and space vehicle trending. The RSC will conduct Ground System Risk Reduction Testing of the MUS with a spacecraft software test bench and the actual space vehicle, as indicated in the milestones below.

2.3.2 OBJECTIVE

The CloudSat mission objective is to provide the first global survey from space with synoptic measurements of seasonal and geographic variations of cloud vertical structure, including the frequency of occurrence, cloud layer thickness, base and top heights, cloud optical thickness, and cloud water and ice content. CloudSat will achieve this objective by flying a spacecraft equipped with a Cloud Profiling Radar (CPR) to make the required measurements. The CloudSat mission is designed to fly in formation with the CALIPSO mission, to make near-simultaneous measurements with CALIPSO's instruments.

2.3.3 MILESTONES

2.3.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03. Software development and test will be in progress.

2.3.3.2 Program

RSC Software Critical Design Review	Nov 2002
Receive Preliminary OOH/SVH	Oct 2003
MUS Operational Test and Evaluation	Oct 2003
Ground System Risk Reduction Testing	Jan 2004
Factory Compatibility Test (FCT)	Apr 2004
Launch	Oct 2004

2.3.4 WORK REQUIRED DURING TRANSITION

2.3.4.1 Program Management

Perform all highlighted SOW tasks. Prepare a cost estimate for FY04.

2.3.4.2 Program Planning

Perform all highlighted SOW tasks.

2.3.4.3 Concept Development

Not Applicable

2.3.4.4 Mission Readiness

Highlighted SOW tasks are applicable in accordance with the following:

- a. SOW 6.0 tasks do not include Factory Compatibility Tests, exercises, rehearsals and on-orbit operations.
- b. Mission Operations Working Group (MOWG) will occur quarterly, alternating between the spacecraft contractor's facility and KAFB. One MOWG will be held at the spacecraft contractor's facility in Boulder, CO during the transition period.
- c. Weekly operations teleconferences will occur throughout the transition period.
- d. In SOW 6.2.2.1, implementation of procedures will not occur since the vehicle will not be on-orbit during the transition period.

2.3.4.5 Operations Support

Not Applicable

2.3.4.6 Engineering Development

Highlighted SOW tasks are applicable in accordance with the following: in SOW 8.2, the MUS design is not applicable since the software and databases have been previously designed.

2.3.4.7 Technical Training

Highlighted SOW tasks are applicable.

2.3.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.4 Communication/Navigation Outage Forecasting System (C/NOFS)

2.4.1 BACKGROUND

C/NOFS will be launched in February 2004 on a Pegasus XL launch vehicle into a 400km x 710km elliptical orbit (11-15 deg inclination). Det 12/VO will be performing MUS maintenance, mission readiness, mission planning, Telemetry Data Relay Satellite System (TDRSS) scheduling, on-orbit operations, and space vehicle trending.

2.4.2 OBJECTIVE

The C/NOFS mission objective is to develop the capability to forecast equatorial ionospheric irregularities causing on-orbit scintillation. The spacecraft has two modes of operation: the survey mode, which will use the AFSCN for data downlinks, and the forecast mode, which will use TDRSS for data downlink while attempting to predict scintillations. The mission has a one-year design life with a three-year goal.

2.4.3 MILESTONES

2.4.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.4.3.2 Program

Factory Compatibility Test	May 2003
Thermal Vac	Jul 2003
Launch	Feb 2004

2.4.4 WORK REQUIRED DURING TRANSITION

2.4.4.1 Program Management

Perform all highlighted SOW tasks. Prepare a cost estimate for FY04.

2.4.4.2 Program Planning

Perform all highlighted SOW tasks.

2.4.4.3 Concept Development

Not Applicable

2.4.4.4 Mission Readiness

Highlighted SOW tasks are applicable in accordance with the following:

- a. SOW 6.0 tasks do not include Factory Compatibility Tests, exercises, rehearsals and on-orbit operations.
- b. Mission Operations Working Group (MOWG) will occur quarterly, alternating between the spacecraft contractor's facility and KAFB. One MOWG will be held at KAFB during the transition period.
- c. Weekly operations teleconferences will occur throughout the transition period.
- d. In SOW 6.2.2.1, implementation of procedures will not occur during the transition period.

2.4.4.5 Operations Support

Not applicable.

2.4.4.6 Engineering Development

Highlighted SOW tasks are applicable in accordance with the following: in SOW 8.2, the MUS design and development is not applicable since the software and databases have been previously designed and tested through FCT.

2.4.4.7 Technical Training

Perform highlighted SOW tasks.

2.4.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.5 Coriolis

2.5.1 BACKGROUND

The Coriolis space vehicle consists of the spacecraft, the WindSat payload, and the Solar Mass Ejection Imager (SMEI) payload. Coriolis was launched January 7, 2003 on a Titan II launch vehicle into an 830 km x 830 km sun-synchronous orbit (98.7 deg

inclination). Det 12/VO performs mission planning and on-orbit operations as well as maintains MUS. The first year of operations is being conducted out of the RSC using the AFSCN. This program will transition to a Navy operations facility for future operations.

2.5.2 OBJECTIVE

The Coriolis mission objective is to measure ocean surface wind speed and direction and take images of solar mass eruptions. The AFSCN is used for S-band satellite contacts with data being routed to the RSC. Det 12/VO schedules the X-band payload data downloads for NPOESS/IPO and USN; NPOESS/IPO and USN decommutate, record, store, and transmit data to the end users.

2.5.3 MILESTONES

2.5.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.5.3.2 Program

Launch	Jan 2003
RSC Orbit Operations	Jan 2003 – Jan 2004
Transition to the Navy	Jan 2004

2.5.4 WORK REQUIRED DURING TRANSITION

2.5.4.1 Program Management

Perform all highlighted SOW tasks. Prepare a cost estimate for FY04.

2.5.4.2 Program Planning

Perform all highlighted SOW tasks.

2.5.4.3 Concept Development

Not Applicable.

2.5.4.4 Mission Readiness

Highlighted SOW tasks are applicable in accordance with the following: Mission Readiness tasks are limited to planning transition of operations to the Navy.

2.5.4.5 Operations Support

Perform all highlighted SOW tasks.

2.5.4.6 Engineering Development

Perform all highlighted SOW tasks. MUS will be maintained since the design and development phase has been completed.

2.5.4.7 Technical Training

Perform highlighted SOW tasks.

2.5.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.6 *Defensive Counterspace TestBed (DTB)*

2.6.1 BACKGROUND

Continue Research and Development activities related to Defensive Counterspace Testbed (DTB) with emphasis on the GPS IIR constellation of satellites.

2.6.2 OBJECTIVE

Develop, test, and refine ability to autonomously fuse satellite-as-a-sensor anomaly detection/classification and off-platform data sources relevant to satellite anomaly/attack discrimination.

2.6.3 MILESTONES

2.6.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.6.3.2 Program

- a. Complete DTB implementation on two GPS IIR satellites by 30 July 03.
- b. Perform efforts from 1 Oct 03 through 30 Sep 04.
- c. Complete DTB implementation on first MILSTAR satellite by 30 July 04.

2.6.4 WORK REQUIRED DURING TRANSITION

2.6.4.1 Program Management

Perform all highlighted tasks and prepare a cost estimate for FY04. Support travel to the following locations in support of DTB:

- a. 1 Technical Interchange Meeting (TIM) in Colorado Springs, CO – Up to ten people for a two-day meeting for the TIM

- b. 1 Program Management Review (PMR) in Colorado Springs, CO – Up to ten people for a two-day meeting for the PMR

2.6.4.2 Program Planning

Perform all highlighted tasks.

2.6.4.3 Concept Development

Determine cost effective approach to provide 24/7 real-time telemetry from the GPS IIR constellation to the ISAS project.

2.6.4.4 Mission Readiness

Not Applicable

2.6.4.5 Operations Support

Perform all highlighted SOW tasks necessary to support Engineering Development outlined in paragraph 6 below.

2.6.4.6 Engineering Development

Highlighted SOW tasks are applicable in accordance with the following:

- a. Develop GPS Block IIR telemetry databases
- b. Collect data for training Neural Networks
- c. Train Neural Networks
- d. Develop data dictionaries and limit files for a GPS Block IIR vehicle
- e. Develop operational displays for this satellite to include attack notification reports, characterization reports, and constellation displays consistent with the Interim Satellite as a Sensor Concept of Operations.
- f. Design and maintain user interface using TowerView software.

2.6.4.7 Technical Training

Perform all highlighted SOW tasks.

2.6.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.7 Defense Satellite Communication System (DSCS)

2.7.1 BACKGROUND

SMC Det 12/VO operates DSCS III for customer defined testing activities. Det 12 conducts operations to ensure the health and safety of the satellite for use in testing.

DCSC III A1 is maintained in a super-synchronous orbit with its payload muted.

2.7.2 OBJECTIVE

Perform 24X7 satellite operations on DSCS III.

2.7.3 MILESTONES

2.7.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.7.3.2 Program

Perform Operations from 1 Oct 03 through 30 Sep 04.

2.7.4 WORK REQUIRED DURING TRANSITION

2.7.4.1 Program Management

Perform all highlighted SOW tasks and prepare a cost estimate for FY04. Support travel to the following locations in support of DSCS:

- a. One Constellation Sustainment and Assessment Team (CSAT) meeting in Colorado Springs, CO – One person for a full day meeting for the CSAT
- b. One Program Management Review (PMR) in Sunnyvale, CA – One person for a full day meeting plus travel for the PMR
- c. One Working Integrated Project Team (WIPT) meeting in Sunnyvale, CA – One person for a full-day meeting for the WIPT

2.7.4.2 Program Planning

Perform all highlighted SOW tasks.

2.7.4.3 Concept Development

Not Applicable

2.7.4.4 Mission Readiness

Not Applicable

2.7.4.5 Operations Support

Highlighted SOW tasks are applicable in accordance with the following:

- a. Perform battery reconditioning.
- b. Perform eclipse monitor supports and 80-minute timer commanding as required by the vehicle's orbit.

- c. Perform lunar eclipse monitor and commanding supports as required by the vehicle's orbit.
- d. Conduct supports on average every five hours to maintain vehicle health.

2.7.4.6 Engineering Development

Perform all highlighted SOW tasks.

2.7.4.7 Technical Training

Perform all highlighted SOW tasks.

2.7.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.8 Defense Satellite Program (DSP)

2.8.1 BACKGROUND

Conduct operations for DSP Flights 12 and 13 to ensure the health and safety of the satellites for the DSP SPO. Maintain the satellite so they may use the residual mission capability and/or to support tests. The DSP satellites are maintained in a super-synchronous orbit.

2.8.2 OBJECTIVE

Perform 24X7 satellite operations on DSP.

2.8.3 MILESTONES

2.8.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.8.3.2 Program

Perform Operations from 1 Oct 03 through 30 Sep 04.

2.8.4 WORK REQUIRED DURING TRANSITION

2.8.4.1 Program Management

Perform all highlighted SOW tasks and prepare a cost estimate for FY04. Support travel to the following locations in support of DSP:

- a. One CSAT in Colorado Springs, CO – One person for a full-day meeting for the CSAT

- b. One PMR in Sunnyvale, CA – One person for a full-day meeting plus travel for the PMR
- c. Miscellaneous teleconferences – One person for half a day, at least quarterly

2.8.4.2 Program Planning

Perform all highlighted SOW tasks.

2.8.4.3 Concept Development

Not Applicable

2.8.4.4 Mission Readiness

Not Applicable

2.8.4.5 Operations Support

Highlighted SOW tasks are applicable in accordance with the following:

- a. Perform battery reconditioning on each satellite.
- b. Perform eclipse monitor supports and associated commanding as required by the vehicle's orbit.
- c. Conduct supports on average every four hours per vehicle during eclipse season or one support every eight hours per vehicle when not in eclipse season to maintain vehicle health.

2.8.4.6 Engineering Development

Perform all highlighted SOW tasks.

2.8.4.7 Technical Training

Perform all highlighted SOW tasks.

2.8.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.9 Interim Satellite-As-a-Sensor (ISAS)

2.9.1 BACKGROUND

Continue Research and Development activities related to ISAS with emphasis on the DSCS III constellation of satellites.

2.9.2 OBJECTIVE

Implement ISAS capability for DSCS III. Operate and maintain ISAS.

2.9.3 MILESTONES

2.9.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.9.3.2 Program

Complete ISAS implementation on first DSCS III satellite by 1 July 03.

Complete ISAS implementation on DSCS III constellation by 30 Sep 03.

Perform efforts from 1 Oct 03 through 30 Sep 04.

Complete ISAS implementation on first GPS IIR satellite by 1 July 04.

2.9.4 WORK REQUIRED DURING TRANSITION

2.9.4.1 Program Management

Perform highlighted SOW tasks and prepare a cost estimate for FY04. Support travel to the following locations in support of ISAS:

- a. One TIM in Colorado Springs, CO – Up to ten people for a two day meeting for the TIM
- b. One PMR in Colorado Springs, CO – Up to ten people for a two-day meeting for the PMR

2.9.4.2 Program Planning

Perform highlighted SOW tasks.

2.9.4.3 Concept Development

Complete implementation of ISAS for the DSCS III constellation. Determine cost effective approach to provide 24/7 real-time telemetry from the GPS Block IIR constellation to the ISAS project.

2.9.4.4 Mission Readiness

Not Applicable

2.9.4.5 Operations Support

Perform highlighted SOW tasks.

2.9.4.6 Engineering Development

Highlighted SOW tasks are applicable in accordance with the following:

- a. Implement ISAS concept for the DSCS III constellation
- b. Develop telemetry databases for the DSCS III constellation.
- c. Collect DSCS III data for training Neural Networks.

- d. Train Neural Networks for DSCS III constellation.
- e. Implement operational displays for this satellite to include attack notification reports, characterization reports, and constellation displays consistent with the ISAS Concept of Operations.
- f. Design build and maintain ISAS abnormality logs for DSCS III
- g. Design and maintain user interface using TowerView software.

2.9.4.7 Technical Training

Perform highlighted SOW tasks.

2.9.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.10 Polar Ozone Aerosol Measurement III (POAM III)

2.10.1 BACKGROUND

POAM III is an NRL payload that was launched on-board the French SPOT IV satellite in March 1998. It is in an 833Km circular orbit at 98.7 deg inclination. The mission design life is one-year with a 5-year operations goal. The RSC continues to operate the POAM III instrument, providing AFSCN scheduling and command data to the French satellite operations center, which is responsible for the operations of the SPOT IV vehicle. Experiment data retrieved from the AFSCN is distributed through the RSC to NRL.

2.10.2 OBJECTIVE

The POAM III mission objective is to measure the concentration of ozone and aerosols in the atmosphere by observing the atmospheric extinction of the solar disk at selected spectral wavelengths.

2.10.3 MILESTONES

2.10.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.10.3.2 Program

Perform Operations from 1 Oct 03 through 30 Sep 04.

2.10.4 WORK REQUIRED DURING TRANSITION

2.10.4.1 Program Management

Perform all highlighted SOW tasks. Prepare a cost estimate for FY04.

2.10.4.2 Program Planning

Perform highlighted SOW tasks.

2.10.4.3 Concept Development

Not Applicable

2.10.4.4 Mission Readiness

Not Applicable

2.10.4.5 Operations Support

Perform highlighted SOW tasks.

2.10.4.6 Engineering Development

Perform highlighted SOW tasks.

2.10.4.7 Technical Training

Perform highlighted SOW tasks.

2.10.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.11 Space Test Program Satellite – 1 (STPSat-1)

2.11.1 BACKGROUND

STPSat is one of several satellites planned for the MLV-05 (Delta IV) mission. The STPSat space vehicle consists of the spacecraft and three payloads, Shimmer, CITRIS, and MEPSI. Det 12/VO is performing MUS development, mission readiness, mission planning, and on-orbit operations. STPSat has a one-year mission life with provisions for continuing operations pending funding by the AF and/or experimenters. All operations will be conducted out of the RSC using the AFSCN. STPSat will be launched into a 550km circular orbit with a 35-38 degree inclination.

2.11.2 OBJECTIVE

The STPSat mission objective is to demonstrate high resolution UV remote sensing. The AFSCN will be used for satellite contacts.

2.11.3 MILESTONES

2.11.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.11.3.2 Program

Begin MUS Development	Oct 2003
FCT	Jun 2005
Launch	Mar 2006

2.11.4 WORK REQUIRED DURING TRANSITION

2.11.4.1 Program Management

Perform all SOW tasks and prepare a cost estimate for FY04.

2.11.4.2 Program Planning

Perform highlighted SOW tasks.

2.11.4.3 Concept Development

Not Applicable

2.11.4.4 Mission Readiness

Highlighted SOW tasks are applicable in accordance with the following:

- a. SOW 6.0 tasks do not include Factory Compatibility Tests, exercises, rehearsals and on-orbit operations.
- b. Mission Operations Working Group (MOWG) meetings occur quarterly, alternating between the spacecraft contractor's facility and KAFB. One MOWG will be held at the spacecraft contractor's facility in Washington DC area during the transition period.
- c. Weekly operations teleconferences will occur throughout the transition period.

2.11.4.5 Operations Support

Not Applicable

2.11.4.6 Engineering Development

Perform highlighted SOW Engineering Development tasks.

2.11.4.7 Technical Training

Not Applicable

2.11.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.

2.12 Experimental Spacecraft System 11 (XSS-11)

2.12.1 BACKGROUND

The XSS-11 Demonstration Mission serves as a pathfinder to a variety of planned future systems. No MUS software development under the STEC contract is anticipated at this time. STEC operations personnel will perform the following tasks:

- a. AFSCN and TDRSS scheduling
- b. Command generation using customer-provided ground system
- c. Real-time command execution and telemetry downloads
- d. Orbit determination for ground system antenna pointing
- e. Spacecraft trending
- f. Coordination with external organizations for orbit products

The customer will perform rendezvous planning.

2.12.2 OBJECTIVE

Each sortie will demonstrate phasing maneuvers, autonomous rendezvous, and proximity operations.

2.12.3 MILESTONES

2.12.3.1 Transition Period

With concurrence from the Government and incumbent contractor, assume full program responsibilities between 7 Jul 03 and 30 Sep 03.

2.12.3.2 Program

Ground Specification Document Signed	Mar 2003
Factory Compatibility Test	Apr 2004
Launch	Nov 2004

2.12.4 WORK REQUIRED DURING TRANSITION

2.12.4.1 Program Management

Perform all SOW tasks and prepare a cost estimate for FY04.

2.12.4.2 Program Planning

Perform all highlighted SOW tasks.

2.12.4.3 Concept Development

Not Applicable

2.12.4.4 Mission Readiness

Highlighted SOW tasks are applicable in accordance with the following:

- a. SOW 6.0 tasks do not include Factory Compatibility Tests, exercises, rehearsals and on-orbit operations.
- b. Mission Operations Working Group (MOWG) meetings occur quarterly, alternating between the spacecraft contractor's facility and KAFB. One MOWG will be held at the spacecraft contractor's facility in Denver, CO during the transition period.
- c. Weekly operations teleconferences will occur throughout the transition period.
- d. The customer will be developing the command and control ground system for this mission. STEC will attend meetings and witness testing of the customer-provided system to ensure the system meets STEC-defined operability requirements.

2.12.4.5 Operations Support

Not Applicable

2.12.4.6 Engineering Development

Not Applicable

2.12.4.7 Technical Training

All highlighted SOW tasks are applicable.

2.12.4.8 Security and Information Assurance (S/IA) Support

All highlighted SOW tasks are applicable.