STATEMENT OF WORK

Space Science Information Technology Support (SSITS)

1 Introduction

The Naval Research Laboratory (NRL) is the Navy and Marine Corps corporate laboratory. The Space Science Division (SSD) at NRL conducts a broad spectrum of basic and applied research programs in the space sciences to satisfy Naval and national goals. These include upper/middle atmospheric science, high-energy astrophysics, terrestrial applications, and solar and heliospheric physics.

2 Scope

The scope of this effort encompasses the management, evaluation, procurement, system integration, programming, maintenance, training, and testing associated with all resources supported by the SSD information systems administration activity that is organizationally located within the SSD Administrative Office and within the SSD branches. The information technology tasks to be performed require knowledge and experience with system integration for desktop/cluster-based computers that include office automation systems, communication equipment, operating systems, scientific software, and business management software currently maintained in the SSD, in the context of enabling forefront space science research and development.

In addition, a capability is needed for software engineering related to web and database development and maintenance. These services shall be provided for multiple NRL offices, including both scientific and administrative offices. All tasks will be performed at the technical direction of the COR.

3 Requirements

The tasks to be performed by the Contractor are organized under a top-level work breakdown consisting of:

a. Hardware and software engineering services for SSD information technology infrastructure;
b. Information technology systems and network management, operations, security and help desk support;
c. Management Information Systems (MIS) software engineering and support; and
d. Scientific research software engineering and support within the SSD branches. These tasks are described in the following sub-sections 3.1 - 3.4, respectively.

All tasks shall comply with all federal and NRL directives as well as Security Technical Installation Guides (STIGs).

Numbers denote the current inventory of resources; however, numbers may fluctuate (usually increase) as indicated by the (+) sign.

The contractor shall accommodate fluctuations in the number of resources.

3.1 Hardware and Software Engineering Services for SSD Information Technology Infrastructure

The Contractor shall support the following information technology, scientific computing, office automation, and networking resources:

3.1.1 Office Automation Resources

The Contractor shall provide office automation resources for over 400+ laptops, desktops and servers of Windows, Mac and Linux type operating systems, plus associated printers and other devices.

3.1.2 Information Server Resources

Typical technologies utilized within the SSD office include servers with MS Windows and Linux operating systems. These are used for MS Exchange Email, database, file and print servers, DNS servers and domain controllers with Redundant Array of lnexpensive Disk (RAID) array technology in an Active Directory environment. Also, an lvanti Patch Server used to push Microsoft security patches (IAVA/B's) to domain Windows desktops and run reports.

3.1.3 Management Information System Resources

This includes an Oracle database server; an Oracle Fusion Middleware Forms/Reports, OID, LDAP, Identity/Access management, OHS, Enterprise Management server; and future development server with Oracle Audit Vault, all based on a linux (RedHat) operating system.

3.1.4 Software Resources to be supported include:

- Microsoft Office Suites for Windows and Mac
- Microsoft Visual Studio
- MacOS
- Windows Server 2016-2025
- Microsoft Hyper-V, Hyper-V Cluster Server, Hyper-V Failover Manager
- Ubuntu 14-24LTS
- RedHat 6-9
- SolidWorks, CAD/Cam
- SolidWorks License Manager
- Adobe Acrobat Suites
- Email Clients
  - Outlook
  - Thunderbird
  - Apple Mail
- MIS (Custom Management Information System database applications)
- DTS (Defense Travel System)
- IMPS
- Base program
- EBIS
- MODERN
- SLDCADA
- Various Web browsers (IE, Chrome, Firefox, Safari, MS Edge)
- Scientific analysis/visualization software (IDL, python, Matlab)
- Scientific programming languages and packages (FORTRAN, CIC++, and IDL)
- Cross-platform networking solutions (SAMBA, NFS)
- Symantec Antivirus
- McAfee Antivirus
- Fiery Xerox SW
- QVT Net/ LABMIS
- IAVA and IAVB reporting
- ActivClient CAC SW and HW
- Putty
- CACKey
- Centrify
- PRISMVxWorks
- ITOS

- Oracle forms and reports
- JAVA
- Navy ERP
- Other Windows, Mac and Linux variety software as needed
- LANsweeper inventory software for Mac, Windows, Liinux
- AtHoc
- AnyConnect VPN
- Zoom
- HPC Kerberos
- Jabber
- STIGviewer
- AvTech Temperature Sensor Software
- Citrix
- VMare Workstation
- XQuartz
- InkScape
- MacPorts, HomeBrew – Mac package installers
- Xming
- Custom VTC Configuration
- Aruba OS
- Rocky 8
- HP Large Format Print Manager
- BEEGFS
- Synology Storage Manager
- Other software applications as necessary; the COR will coordinate any such new requirements with the KO and Vendor if a task order to amend the SOW is required.

3.1.5 Scientific Computing Resources

The SSD scientific computing resources are comprised of over 300+ Solaris, Unix, Linux, Mac and Windows systems supporting ground system software development, hardware design and building, data process, data pipelines, and data hosting using various scientific programs such as PRISM, IDL, ITOS, Python, Matlab, FORTRAN, C++, C#, Java, Javascript, Perl, Python, MPI and openMP as well as SolidWorks and PTC Creo (formerly known as Pro/Engineering). The contractor shall install, configure and maintain the scientific data processing systems.

3.1.6 Office Automation Resources

The Contractor shall maintain the Division Office Automation (OA) systems. SSD operates a distributed, network OA system supporting word processing and document management, electronic mail, calendaring and scheduling, spreadsheet applications, and Dynamic Data Exchange (DDE)- and Open Database Connectivity (ODBC)-based client server data links.

3.1.7 Networking Resources

The backbone consists of three interconnected Hewlett Packard (HP) switches that provide 1 Gb/s access to the desktops and 10 Gb/s access to branch computer room. The up-link is currently 1 Gb/s. NRL network group maintains the building network from the up-link to the backbone to wall jacks. The SSD contractor shall be able to read network maps, understand networking protocols, use network monitoring tools and capable of installing and configuring applicable network resources.

3.1.8 Conference Resources

The SSD Conference Room includes video projector and computers that shall be maintained by the SSD information systems administration activity contractor. Hardware and software are all maintained for SSD meetings. At times, attendance by Information Technology (IT) personnel may be required in a meeting venue to ensure smooth operations and transitions.

3.1.9 Information Systems Hardware and Software Engineering

The Contractor shall provide hardware and software engineering services both within SSD and also for other NRL Divisions on an as-needed basis. The Contractor shall provide the necessary information systems hardware/software support required by the SSD. These services may include technology planning, systems and network management, scientific software engineering, information systems development and maintenance, systems engineering, and information cyber security compliance.

3.1.10 Systems Engineering and Resources Planning

The Contractor shall keep abreast of updates and new innovations available and upon request provide, informed consultations and/or formal assessments to the Federal Information Assurance Officer/Network Technical Representative (IAO/NTR) and COR as to whether changes should be implemented. The contractor shall perform the necessary surveys, evaluation, and recommendation to the COR for selection of hardware and software products required.

Consideration will be given to maintaining continuity and compatibility of these products where tasks to be performed are interrelated or interdependent. [CDRL A003]

3.2 Information Technology Systems and Network Management, Operations, Security and Help Desk Support

The Contractor shall perform:

a. Technical and systems management and administration;
b. Security administration of the hardware/ software identified in Section 3.1;
c. Provide a help desk capability in accordance with Technical Direction from the COR; and
d. Support the maintenance of web pages and databases for the efficient use of scientific data both for public release and to provide for information transfer to other software systems.

All activities shall be documented in the monthly financial and technical reports [CDRL 0001, 0002, 0003]

3.2.1 Technical Management

Major activities and tasks to be performed by the Contractor include:

a. Maximize reliability, maintainability and availability of SSD IT hardware and associated peripherals.
b. Interface with NRL Information Systems Security (Code 1221) and implement all required computer security procedures.
c. Interface with the NRL networking group (Code 5592) to maintain the SSD networking infrastructure. Provide IT technical support and training for the scientific and administrative users.
d. Provide performance monitoring and tuning on SSD IT hardware and software systems in accordance with technical direction.
e. Install hardware and software upgrades to SSD IT systems in accordance with technical direction.
f. Perform SSD IT system software modifications in accordance with technical direction.
g. Maintain the SSD computer configuration management systems and databases including hardware component lists, modifications, upgrades and maintenance histories.
h. Coordinate effectively with IT hardware and software vendor representatives in troubleshooting resources affecting SSD computing.

i. Ensure proper integration of multiple computer systems and types to the SSD shared computer systems and infrastructure including satisfying both technical and administrative interface requirements in both IT hardware and software.
j. Ensure proper operation of IT desktop and portable hardware, software, and servers that are critical to any and all SSD space flight mission projects.
k. Perform SSD information security updates, including Information Assurance Vulnerability Alerts (IAVAs), Information Assurance Vulnerability Bulletins (IAVBs) as well as Assured Compliance Assessment Solution (ACAS), Retina scans and Plan of Actions and Milestones (POAM) to identify and address vulnerabilities to ensure compliance with NRL/DoD Navy regulations. Verify software installs comply with the DoD approved list in the DADMS database. System Hardware and Software.

The Contractor shall perform system management of the SSD IT servers listed in, but not exclusive to, Section 3 .1. The Contractor shall also perform daily system backups and implement proper disaster-recovery procedures. The Contractor shall install, upgrade, and configure network software for any and all Mac, Windows and Linux servers used in the Division. Linux servers may include CentOS, Ubuntu and/or Redhat. The Contractor shall perform the necessary system configuration monitoring and tuning to optimize system performance and response. The Contractor shall coordinate scheduled and emergency maintenance with third party maintenance vendors.

3.2.2 Database Administration

The Contractor shall perform software development, software installation, version upgrades to clients and servers (e.g., Linux, Mac, Windows, and Oracle Development software), performance tuning, user account maintenance and security, storage management, database backups and disaster recovery, and application-specific administration.

3.2.3 Network Applications

The Contractor shall be committed to providing publication-quality word processing and document management based primarily on a Microsoft Office environment (Word, Excel, and PowerPoint) and custom DMIS publication system. Client/server POP, IMAP, and MS Exchange services are provided. Outlook, Thunderbird, Apple Mail and Outlook web Access clients are used. The Contractor shall be responsible for implementing and maintaining e-mail service environments, and for the system-wide management of the SSD e-mail software. The Contractor shall also provide technical assistance and training in the use of all SSD network applications and resources in accordance with Technical Direction from the COR.

3.2.4 Information System Security

The Contractor shall act as a temporary point-of-contact in the absence of the Federal IAO/NTR Information Assurance Officer/Network Technical Representative (IAO/NTR). The Contractor shall, at a minimum, perform the following security administration tasks:

- User support:

  a. Recommend to the Federal IAO/NTR and, as needed, nominating qualified network users for approval by the NRL Security Networking Group.
  b. Ensuring SSD IT users have access to the network, only after approval by the NRL Code 1220.
  c. Training new SSD IT users on the proper operating and security procedures.
  d. Ensuring departed users accounts are secured and closed according to NRL directives and policies.
  e. Ensure appropriate vetting process, training and forms are completed according to the type of SSD IT account needed (i.e., contractor, Federal Employee, Collaborator, Foreign National, etc.)

- SSD IT systems support:

  a. Ensuring that approved configurations of connected systems are maintained and that configuration changes are approved by the NRL Security Networking Group before implementation.
  b. Using Shavlik HFNetChk and windows group policies, ensuring that the Division desktop and portable IT systems and the SSD shared computer systems and infrastructure meet DoD and DoN security standards, and reporting completed IAVA/B's to the SSD NTR or NRL Security Networking Group or both in accordance with technical direction.
  c. Notifying the COR, the Federal IAO/NTR, and the NRL Security Networking Group of security violations or suspicious activities pertaining to the SSD computer systems, servers and the SSD shared computer systems and infrastructure.

3.2.5 Help Desk Operation/IT Support

The Contractor shall provide a capacity to maintain a help desk operation to assist users with computer-related problems. The help desk receives requests via electronic mail, a telephone "hot line", or personal visit. This capability can be addressed informally via the various on-site Contractor staff; however, it must accommodate the staggered working hours that are commonplace in the SSD, typically 7 AM to 7 PM, Monday through Friday. The Contractor shall respond to user requests as well as prioritize, track, report, and analyze these requests. The tasks required by the help desk may include, but are not

limited to: assisting users when system-related problems arise, creating and maintaining administrative user training and help documentation; and troubleshooting and diagnosing problems, such as system failures, determining whether the source is hardware, system software, or applications software related and providing customers with GFE backup systems to perform work in the event of catastrophic failures if system-related problems cannot be resolved in a timely fashion.

The Contractor shall provide briefing/ presentations and meeting support to include (a) setup and maintenance of IT and IT-related hardware such as video projectors and laptops, (b) software help, and (c) information technology services for SSD meetings.

3.2.6 Systems Management and Support Planning

The Contractor shall remain aware of updates and new innovations available in the automation field and provide informed assessments and recommendations to the COR and the Federal IAO/NTR on whether changes should be implemented. The contractor shall survey, evaluate, and recommend selection of required hardware and software products to the COR. Consideration will be given to maintaining continuity and compatibility of these products where tasks to be performed are interrelated or interdependent. [CDRL A003]

3.2.7 Web and Database Development Software Support

The Contractor shall provide support on an as needed basis to develop and maintain access to controlled web pages for SSD projects. Expected level of support is for 8-12 projects. This includes revising, existing or developing new web pages, as needed, to access space flight databases, to organize and maintain project information and data for public release, as appropriate. Such public information shall have been approved for public release according to the applicable NRL procedures.

3.3 Management Information Systems (MIS) Software Engineering and Support

The Contractor shall perform the software engineering of a comprehensive Management Information System (MIS) based upon the existing Space Science Division Management Information System (SSDMIS) and extensions thereto. Deliverable for Section 3.3 is CDRL A003.

The SSDMIS has been developed using the Oracle Relational Database Management System (RDBMS), Oracle Forms and Reports, OID, LDAP, Fusion Middleware, and Linux OS. The contractor shall be responsible for the entire systems development life cycle using the Oracle RDBMS, Developer Server, Application Server, Forms and Reports, and Designer in order to maintain existing applications and develop specified extensions.

3.3.1 Software Engineering for the Space Science Division MIS (SSDMIS)

The SSDMIS consists of the eight major subsystems:

1. Job Cost Information Subsystem
2. Comptroller Data Interface Subsystem (Reconciliation)
3. Budget Management Subsystem
4. Contracts Tracking Subsystem
5. DCPS Labor Transfer Subsystem
6. Library Publications Tracking Subsystem (LTS)
7. Inventory/ADP Resources Management Subsystem
8. Personnel Information Subsystem

Each subsystem is described below. Each subsystem description consists of two sections: current system features and new development efforts.

The Contractor shall provide and maintain a set of standard reports available to users, for all subsystems. The reports shall be viewed interactively on display screens, printed, or stored in data files for future examination. Data access shall be determined by various security levels determined by the COR, the IT Administrative Officer and/or Federal IAO/NTR.

The following sections 1 through 9 are a listing of the eight applicable major subsystems.

1. Job Cost Information Subsystem

The Job Cost Information Subsystem (JCIS) is the core subsystem of the SSDMIS. It organizes the general ledger activities and job cost accounting in NRL's Navy Working Capital Fund (NWCF) environment.

Current system features:

- Maintain general journals to enter and track labor, procurement, travel, training, miscellaneous, distribution and transfer costs.
- Maintain a general ledger to accumulate and report costs by both expense type and job order number.
- Maintain job order data including sponsor and principal investigator information.
- Maintain ability to track costs by project which could include various job order numbers.
- Maintain ability to track costs by expense element sub categories.
- Maintain ability to report overtime hours authorized verses worked.
- Maintain ability for "prior year" storage and reconciliation module to manage unexpended balance issues.

- The Contractor shall add the ability to upload funding documents and associate them with Job Order Numbers. The Contractor shall maintain all current capabilities and add new development features in accordance with technical direction.

2. Comptroller Data Interface Subsystem (Reconciliation)

The Comptroller Data Interface Subsystem (CDIS) manages the ability to compare the Division job cost financial data against financial data maintained by the NRL Comptroller.

Current system features:

- Produce reports that help identify discrepancies between the SSDMIS and NRL financial reports.
- Share information with the Job Cost information system, such as procurement status, TID labor costs, and cumulative job order costs.
- Maintain on-line storage of all the bi-weekly NRL financial reports, including monitoring email distribution. Provide printing capabilities at various security levels.
- The Contractor shall maintain all current capabilities and add new development features in accordance with technical direction.

3. Budget Management Subsystem

The Budget Management Subsystem (BMS) provides a method for budgeting for costs tracked in the JCIS and CDIS. The BMS is used for developing budgets at the beginning of the fiscal year, tracking expenditures against budgets, and to project spending throughout the year.

Current system features:

- Maintain storage of all of the following types of budget information: job orders, labor, travel, materials and supplies, miscellaneous expenses, and out-of-division expenses. Budgeted costs shall be maintained by cost element, sub-cost element and job order.
- Allow the selective viewing of Division budget information, both in report form and interactively on display screens. Various security levels are maintained.
- At both the Division and Branch level, produce cost status and year-end projection reports detailing budget verses actual cost for each job order.
- Maintain ability to track employee labor hours budgeted versus actual.
- Maintain ability to budget and report by project and WBS.
- The Contractor shall maintain all current capabilities and add new development features in accordance with technical direction.

4. Contracts Tracking Subsystem

The Contracts Tracking Subsystem (CTS) allows the monitoring of all Division contracts from RFP through stages of modification, funding, invoicing, and liquidation.

Current system features:

- Maintain on-line storage of all of the following types of contract related information: deliverables, government furnished equipment, government approved items, action items, budgets, expenditures, funding, value, modifications, accruals and invoices.
- Share contract obligation, invoice, and expenditure rate information with the JCIS and the CDIS.
- Maintain ability to track contract costs and funding by project and WBS.
- Maintain contractor personnel capabilities to track historical employment and badging information.
- Maintain ability of contractors to upload Financial Reports (monthly) to system.
- The Contractor shall maintain all current capabilities and add new development features in accordance with technical direction.

5. DCPS Labor Transfer Subsystem

The Division is required to enter bi-weekly time and attendance information in the Defense Civilian Payroll System (DCPS). This labor information is transferred from the JCIS via SLDCADA.

Current system features:

- Provide for daily in/out time entry and job order assignment for employee timecards.
- Provide a transfer capability from timecard to JCIS labor.
- Provide upload capability from SLDCADA to JCIS via SLDCADA-generated PDF.
- Provide corrected time card capability to facilitate labor audit.
- Provide time card capability via http/https.

The Contractor shall maintain all current capabilities and add new development features to the DCPS labor transfer subsystem, as tasked.

6. Library Publications Tracking Subsystem (LTS)

The Division maintains a database of publication information. This database tracks all publications and presentations credited to Division scientists.

Current system features:

- Electronic creation and document management of NRL Presentation Release forms.
- Report publication credits by author, branch, and type.
- Electronic creation and management of Publication Approval form
- Ability to upload electronic version of publication being tracked, as tasked.

The Contractor shall maintain all current capabilities of the LTS and add new development features as tasked.

7. Inventory/ADP Resources Management Subsystem

The Inventory/ADP Resources Management Subsystem (IMS) provides the Division with a method of identifying and tracking inventory through all stages of procurement custody, maintenance, and disposal.

Current system features:

- On-line storage of inventory information for both ADP and non-ADP equipment.
- Maintain information about software: licenses, maintenance, installation, and version.
- Duplicate data stored in the NRL Asset Management System for independent verification.
- Provide capability to monitor Government Furnished Equipment while assigned to a contractor.

The Contractor shall maintain all current capabilities of IMS and add new development features as tasked.

8. Personnel Information Subsystem

The personnel subsystem is used for tracking Human Resources information concerning Federal Employees.

Current system features:

- Maintain personal data including locator, education, physical, safety and salary information.
- Provide phone lists, employee lists, grade and code information and clearances.

The Contractor shall maintain all current capabilities of the PIS and add new development features as tasked.

9. Additional Information Tracking

Below is the additional information that is tracked by the system.

- Contractor Badge Request
- Common Access Card Request
- Overtime Request
- Facilities Repair Request
- DMIS Problem Reporting System
- Organization Chart

The Contractor shall maintain all current capabilities of the Additional Information Tracking subsystems and add new development features as tasked.

3.3.2 Software Engineering for Other Divisions' MIS

The Contractor shall provide MIS software engineering for other NRL Divisions, which shall be provided through the development of a generic Divisional Management Information System (DMIS). The DMIS is maintained by porting SSDMIS code to UNIX machines across the network. As DMIS revisions are performed for the SSD, these revisions are propagated outward to the other DMIS divisions at NRL. The Contractor shall provide SSD MIS software engineering. Database administration, development, configuration management, and help desk activities shall be performed for each of the divisions.

3.4 Scientific Research Software Engineering and Support

3.4.1 Geospace Science and Technology Branch (Code 7630) Support

3.4.1.1 Introduction

The Geospace Space and Technology (S&T) Branch (Code 7630) conducts research to observe, understand, model, and forecast the geospace environment and its connections to its lower and upper boundaries. These research activities involve a combination of data analysis from both ground and space-based observations systems and extensive modeling of the geospace environment using a suite of global and regional models. The computational resources supporting this research typically include (1) multiprocessor Linux-based servers for running geospace modeling and data analysis/visualization applications in both serial and parallel modes with terabyte scale storage capacity; (2) high-performance computing clusters; (3) both Linux and non-Linux based data servers; (4) and approximately 100 desktop/laptop resources including PCs, MACs, and LINUX devices.

3.4.1.2 Requirements

The Contractor shall provide system management, space scientific technical expertise with emphasis on large observational databases, and set up, maintain and provide upgrades as needed for these computer systems. Specific expertise is required for

installation, maintenance, and license management of scientific analysis and visualization tools (e.g., IDL, Python, Matlab), scientific programming languages and packages with parallel processing support (e.g., Intel FORTRAN, MPI, openMP) and batch scheduling software. The Contractor shall perform selection, installation, and upkeep of computer hardware, including system administration tasks for all servers, workstations, and laptops with Macintosh, Windows, and Linux operating systems. The Contractor shall maintain and support cross-platform networking solutions to allow access to shared resources such as data servers and printers. The Contractor shall perform system backups on all critical systems as needed. The Contractor shall author and implement proper disaster-recovery procedures. The Contractor shall maintain an anonymous ftp server or equivalent solution to allow incoming and outgoing transfer of data files between scientists and external sponsors/collaborators in accordance with all current and future NRL security requirements. The Contractor shall implement system software updates and security patches, user account generation and maintenance, system hardware and software troubleshooting and repair.

3.4.2 High Energy Space Environment Branch (Code 7650) Support

3.4.2.1 Introduction

The High Energy Space Environment Branch conducts a multifaceted program in observational and theoretical research in high energy astrophysics and associated detector and radiation transport simulation technologies. This research includes the collection and analyses of large volumes of scientific data from such missions as the Fermi Gamma ray Space Telescope and upcoming projects to be deployed on the International Space Station. In support of this research the Branch maintains an office automation environment of a total of more than 100 hosts, including Windows PCs, Macs, Linux machines, and a supporting array of printer/plotters.

Scientific analyses are supported by multiprocessor Linux-based servers supporting high energy astrophysics data analysis, detector development and operations, and supporting Monte Carlo simulations of radiation transport. A tape backup system is used to backup and archive data and software products.

3.4.2.2 Requirements

The Contractor shall provide IT system management for the Code 7650 branch staff and perform set up and maintenance for the branch computer systems. The contractor shall provide system software updates and security patches. The contractor shall provide user account generation and maintenance. The contractor shall provide data backup operations. The contractor shall provide system hardware and software troubleshooting and repair.

3.4.3 Solar and Heliospheric Physics Branch (Code 7680) Support

3.4.3.1 Introduction

The Solar and Heliospheric Physics branch conducts a multifaceted program in observational and theoretical research in solar physics and space physics. This is accomplished through the development, operation, and analysis of data from space based sensors incorporating optical, and detector technologies. This research includes the generation of engineering documentation as well as the collection and analyses of large volumes of scientific data from such missions/spacecraft as the Solar and Heliospheric Observatory (SOHO), the Solar Terrestrial Relations Observatory (STEREO), Hinode, the Solar Dynamics Observatory (SDO), Parker Solar Probe (PSP), Solar Orbiter (SolO), Compton Gamma Ray Observatory (CGRO), Chandra X-ray Observatory, Hubble Space Telescope as well as space flight instruments such as the

Ultraviolet Spectro-Coronagraph (UVSC) and the Compact Coronagraph (CCOR). In support of this research the Branch maintains an office automation environment of a total of300 hosts (PCs, Macs, LINUX, Solaris) with a supporting array of printer/plotters. The branch supports ground system software development using ITOS for projects such as LASCO, SECCHI, WISPR, and SOLOHI. Customized software, Epiware software is used in data collection and management support for various projects.

Scientific analyses are supported by a cluster of Linux computers (a) to process the spacecraft telemetry data in near-real time (b) to process archival data not in real-time and (c) to serve the processed data to the Web and LINUX storage arrays of 75 TBytes. A tape backup system is used to backup and archive data and software products.

3.4.3.2 Requirements

The Contractor shall provide system management, mission support and expertise in handling the processing and rapid dissemination of terabytes of space science data generated by a fleet of spacecraft instrumentation that are operated by a variety of sponsoring and operational agencies. These agencies can include NASA or NOAA as well as the European Space Agency and the Contractor needs to be able to accommodate the differences in data security and data availability requirements imposed by these agencies. In addition to this mission support, other duties shall include system software updates and security patches, user account generation and maintenance, data backup operations, system hardware and software troubleshooting and repair, setup and maintenance of a large-format multi-monitor video display system.

Deliverables- 3.4:

A001-Monthly Financial Report

A002- Contract Invoice and Payment Report

A003- Technical Employment Summary of software and hardware support summary and provide any updates to configuration management.

4. SPECIAL REQUIREMENTS

This section describes the special requirements for this effort. The following sub-sections provide details of various considerations on this effort.

4.1 Security and Safety Compliance

All Contractor personnel who require NRL base access or access to NRL unclassified material and/or unclassified systems shall possess a favorably completed DoD National Agency Check with Law and Credit (NACLC). Contractors who require access to Secret material must have, at a minimum, a favorably completed DoD National Agency Check with Law and Credit (NACLC) and final DoD granted SECRET security clearance the time of proposal submission. The Contractor shall ensure that all classified material is handled in accordance with the issued DD 254, the National Security Program Operating Manual (NISPOM) (DoD 5220.22M) and all NRL and applicable Security Program Guides/Directives.

Contractor personnel performing any function designated as a component of the Cyber Security Work Force (CSWF), and/or having privileged user access to NRL information systems shall require background investigations and security clearances commensurate with the access level and security classification of the system being accessed as specified in SECNAV M-5510.30.

System Administrators with privileged access may work in the computing, network and/or enclave environments. System Administrators with privileged access shall meet the training and certification requirements for IAT level I at the computing environment (CE), IAT level II at the network environment (NE), and IAT level III for the enclave environment as specified in SECNAV M-5239.2. The submitted DoD Tier 5