Statement of Work
NOAA Joint Polar Satellite System Office

1. BACKGROUND AND SCOPE

The National Oceanic and Atmospheric Administration (NOAA), National Environmental Satellite and Information Service (NESDIS), provides scientific and technical leadership for development of environmental satellite services and products. NESDIS is seeking contractual support to fulfill its missions and functions in the following three work areas which detail the scope, objective and technical requirements of the work.

The Joint Polar Satellite System (JPSS) is the Nation's next generation polar-orbiting operational environmental satellite system, procured by NOAA, through the National Aeronautics and Space Administration (NASA). JPSS will provide continuity of critical observations for accurate weather forecasting, reliable severe storm outlooks, global measurements of atmospheric and oceanic conditions such as sea surface temperatures, ozone, and more. JPSS represents a major upgrade to the existing Polar-orbiting Operational Environmental Satellites (POES), which have successfully served the operational weather forecasting community for nearly 50 years. The Common Ground System (CGS) is a multi-mission ground system and the Suomi National Polar Partnership (S-NPP), launched October 28, 2011, is the first mission of the CGS.

The NOAA JPSS Program (JPSS), part of NESDIS, implements the NESDIS Deputy Assistant Administrator for Science’s Level 1 oversight responsibilities, maintains insight into implementation of the NASA JPSS Program, and manages NOAA-implemented elements of JPSS. This includes defining requirements; integrating user systems; integrating partner contributions; integrating NASA-developed products into the NOAA architecture; developing the science necessary to deliver measurement products; storing, delivering and archiving the satellite data; operating the space and ground segments; and representing the system to all entities internal and external to the Government including international partners.

Services provided under this task may support NOAA or NASA JPSS activities.

2. TECHNICAL SERVICE REQUIREMENTS/TASK ACTIVITIES

The Contractor may provide technical and engineering services in support of 1) Algorithm and Data Product subject matter expertise including project monitoring, communication, and coordination; 2) Algorithm and Data Product calibration, validation, and verification technical leadership; 3) Data Products Engineering and Services Support; 4) Program Science Proving Ground, Risk Reduction, and Requirements; 5) External and internal science communications; 6) Program science-related engineering; and 7) General support in planning and executing for JPSS, including configuration and risk management.
Activity 1: Algorithm and Data Product subject matter expertise including project monitoring, communication, and coordination

- Provide engineering technical subject matter expertise in JPSS Algorithm Engineering Review Board (AERB) and NESDIS Satellite Product System Review Board (SPSRB) processes to control technical changes affecting the operational science algorithms.
- Support the Algorithm Discrepancy Report Action Team (DRAT) in coordination and tracking of Discrepancy Reports, compilation of meeting minutes and facilitation of comments and concurrence by stakeholders.
- Assess severity of reported discrepancies and advise Algorithm Project leadership of technical impact.
- Assist in the documentation of algorithms and technical reports.
- Assist the algorithm and validation teams in integration and operation of Algorithm Support Function (ASF), Calibration/Validation, and Long Term Monitoring (LTM) Tools.
- Establish and implement necessary communication strategies for the improvement and awareness of external team member activities in support of operational algorithms and associated science.
- Establish and implement necessary communication strategies for the improvement and awareness of JPSS Ground Data Products activities to external algorithm and validation teams.
- Interface with other segments of the JPSS Program to gain status and report progress related to algorithm and validation team performance.
- Interface with external providers to gain status and report progress related to algorithm and validation team performance.
- Recommend or contribute to JPSS Algorithm Project policy and strategy.
- Report as necessary on internally and externally initiated changes in status.
- Provide, as needed, expertise in the Physical Sciences including Atmospheric and Space Physics, Communications and Networking, Computers and Software, Systems Engineering, and Sensor Modeling Support for Optical Analysis and Microwave Engineering.
- Interface as needed, with integrated product teams, user liaisons, and International liaisons to assist in the clarification of requirements, system interface definition, interface compliance, and overall system requirements satisfaction.

Activity 2: Algorithm and Data Product calibration, validation, and verification technical leadership

- Assist in the management of the development, verification, implementation, calibration, validation, and maintenance of the JPSS Program’s science algorithms and associated data products.
- Provide knowledge of satellite data use in operational meteorological and oceanographic forecasting.
- Provide knowledge of environmental satellite acquisition programs with an emphasis on algorithms.
- Provide knowledge of NOAA operational data sources, infrastructure, and interfaces. 
• Manage algorithm and data acquisition activities for meeting requirements for level 1 data products.
• Manage algorithm and data acquisition activities for meeting requirements for level 2 data products.
• Manage algorithm development, implementation, and test activities in coordination with NOAA NESDIS Center for Satellite Applications and Research (STAR) EDR Team Leads.
• Work with NOAA data providers to acquire the best operational sources of ancillary data for use in the IDPS.
• Develop and maintain algorithm and product plans including budget, schedule, technology readiness, and risk management
• Assist in algorithm and data product activities necessary for JPSS-1 mission success.
• Assist in planning the verification of requirements for Level 1 algorithms and data products for the JPSS-1 mission
• Assist in planning the verification of requirements for Level 2 algorithms and data products for the JPSS-1 mission
• Serve as DPA IPT point of contact for the JPSS-1 Mission Manager
• Serve as DPA IPT point of contact for the S-NPP Mission Manager
• Assist in review of ground project documentation with JPSS-1 effectivity.
• Confer with the Program Scientist and JPSS customers and report on whether the JPSS-1 mission will meet their needs and expectations and make recommendations to improve customer satisfaction.

Activity 3: Data Products Engineering and Services Support
The Data Products Engineering and Services (DPES) segment of the NASA JPSS Ground Project is responsible for the development, verification, and support of science algorithms in the Common Ground Segment (CGS). The contractor shall provide engineering subject matter expertise and project monitoring communication and coordination both within the JPSS Ground Project and with external providers in support of DPES activities.

• Provide design, development, integration, testing, deployment of software modules, and user training support for GRAVITE and FTS systems. Perform assigned software development as per NASA and/or NOAA (as applicable) software engineering policies and procedures. Participate in activities with external mission partners (e.g. technical interchange meetings, interface testing) as needed.
• Perform tasks that are necessary to operate GRAVITE/FTS and keep the system operating by remediying problems. Start up and shut down GRAVITE/FTS processes as needed and according to regular procedures. Monitor and, as may be required, report and/or log, various parameters that are indicative of whether the system is running properly.
• Develop, deploy, and maintain the JPSS data quality monitoring systems. Work closely with the JPSS Ground Project, OSPO, and STAR to define processes and procedures to monitor and assess the quality of the JPSS data and products. Interface with the STAR and OSPO to ensure the Data Quality Support team (DQST) evaluation methods and tools are consistent with science’s best practices to instill
quality into the routine methods used to monitor data product quality. Develop data quality tools that run on GRAVITE as a Product Generation Executables (PGE), Algorithm Science Function (ASFs), and or user defined tools.

- Assist the algorithm teams with the preparation and submission of Algorithm Discrepancy Reports (ADRs), Configuration Change Requests (CCRs), Algorithm Development Library (ADL), Algorithm Change Packages (ACPs), and associated and supporting documentary materials. Perform integration testing in the G-ADA of ACPs submitted by the algorithm teams. Provide general administration of the government-side Common CM users, including enrolling and training users; providing user information to the CGS contractor so that user accounts may be created and maintained, assistance and advice concerning the use of Common CM.
- Perform systems engineering activities, for GRAVITE and FTS built, maintained and/or managed by DPES. Perform systems engineering tasks consistent with applicable NASA systems engineering policies and practices. Coordinate with other JPSS Ground Project organizations, including JPSS Ground Software Assurance, Mission Assurance, Security, and Ground Project Integration and Test, as needed, to assure that DPES-managed activities and systems are in accord with overall Ground Project objectives, plans and guidance.

Activity 4: Program Science Proving Ground, Risk Reduction, and Requirements

- Support analysis of alternatives for product generation and product utilization.
- Provide deep dive analysis of data denial studies generated by NCEP to demonstrate value of JPSS for weather forecasting.
- Proving Ground Initiatives (PGI) Coordinators. Support coordination of Proving Ground Initiatives which includes developing technical roadmaps to improve user utilization of JPSS products, development of user centric operational demonstration work plans and organizing PGI meetings.
- Support development/implementation/use of a sounding algorithm testbed enabling development and verification of new algorithms, and to provide analysis for instrument waivers and potential instrument improvements. Develop algorithm enhancements including using forecast temperature and water vapor fields in the sounding algorithm and other a priori information. Support the cal-water campaigns for atmospheric rivers by providing sounding products using the latest algorithms by reprocessing SNPP sounding products. Demonstrate the value of SNPP sounding products for climate applications. Support training of sounding products with NWS.
- As Low Earth-observing Requirements Working Group (LORWG) Secretariat: chair the JPSS LORWG: Facilitate meetings; Manage procedures; Coordinate LORWG decisions; Communicate outcomes.
- Identify and communicate the effectiveness of mission science data and customer applications of S-NPP data; ensure effective communications between research and operations community; identify additional users and potential areas where NPP data may be used operationally.
- Provide communication support for Proving Ground and Risk Reduction Portfolio, and monthly science seminars, including the development of the annual science digest and the proving ground risk reduction portfolio and progress reports.
Activity 5: External and internal science communications

- Support program science through internal and external communications support, particularly in the areas of report writing and editing
- Support JPSS through internal and external communications support to technical and non-technical audiences, including but not limited to website content development, writing and copyediting, analyzing communications opportunities and suggesting new ones, and social media management and content development

Activity 6: Program science-related engineering

- Coordinate with the NOAA JPSS Program Scientist, NASA JPSS Project Scientist, and other Project scientists and supporting sensor and algorithm science staff to facilitate communications and ensure consistency in Program Systems Engineering (SE) and Science efforts, directives, and documentation.
- Provide subject matter expertise on system installation, integration, testing and transition to operations
- Review technical documentation, including interface requirements, test plans and procedures, and reports

Activity 7: General support in planning and executing for JPSS, including configuration and risk management

- Lead JPSS Configuration management for materials under NOAA JPSS control, including but not limited to establishing processes and procedures and ensuring version control working closely with the Program Systems Engineering.
- Lead JPSS Risk Management activities, including but not limited to integrating NESDIS and NOAA risks, representing JPSS to NASA and NESDIS, and establishing processes and procedures.
- Analyze and review JPSS program system implementation plans; operational concepts; Orbit and Attitude determination requirements; Launch and Early Operations procedures, and configuration management.
- Support the JPSS Chief Systems Engineer to: review technical documentation, including interface requirements, test plans and procedures, and reports; ensure software engineering processes conform to agency standards; review software metrics; perform requirements analysis; prepare programmatic and technical documents and briefs; convene and participate in special studies and review boards; lead development of JPSS system architecture and concept of operations; provide subject matter expertise on operations, direct broadcast services, and frequency management; provide subject matter expertise on system installation, integration, testing and transition to operations, and end-to-end user validation.
- Perform the duties of a Mission data lead that includes minimizing the impact and duration of data system issues, leading the effort in coordinating and documenting response to anomalies impacting the ability of the NPP Mission Systems to receive,
transfer and process Mission Data, and keeping the NPP project appraised of data systems status.

- Support technical staff to ensure they are able to undertake their activities and complete work on schedule. General focus on project management activities – scheduling, budgeting, tracking on-going discussions and documenting resolution, maintaining official documentation/record-keeping, tracking property, project system access, etc.

3. IT SECURITY REQUIREMENTS

- The contractor shall comply with the IT Security requirements of the Department of Commerce as outlined in Commerce Acquisition Regulation (CAR) 1352.239-72, Security Requirements For Information Technology Resources (April 2010), except that development of a Security Accreditation Package in accordance with CAR 1352.239-72, section (i) is not required.

- Personnel shall be screened in accordance with the requirements for Moderate Risk contracts as specified by CAM 1337.70 section 2.3, as determined by the Contracting Officer; specifically, in accordance with CAR 1352.237-70, Security Processing Requirements—High or Moderate Risk Contracts (April 2010). Any access by contract personnel who are Foreign Nationals shall be in accordance with the requirements of CAR 1352.237-73, Foreign National Visitor and Guest Access to Departmental Resources (APR 2010).

4. WORK CLASSIFICATION LEVEL

This task order is authorized to include work up to and including Top Secret (TS) classification level. Personnel requiring access to classified National Security Information shall be screened in accordance with the requirements for Special Sensitive, National Security, contracts as specified by CAM 1337.70 section 2.4; specifically, in accordance with CAR 1352.237-72, Security Processing Requirements – National Security Contracts (April 2010). Any access to classified national security information by contract personnel who are Foreign Nationals is prohibited. Only U.S. Citizens are eligible to obtain a security clearance. All Department of Commerce security processing pertinent to this contract will be conducted at no cost to the contractor. Personnel security clearances for National Security contracts in the Department of Commerce are processed according to the Department of Defense National Industrial Security Program Operating Manual (NISPOM). The contractor requires access to NSI at the TS level and agrees to comply with the NISPOM. Additional guidance on National Security contracts is available in Chapter 37, Industrial Security, of the DOC Manual of Security Policies and Procedures.

5. DELIVERABLES

The following deliverables shall be developed in concert with the respective NOAA managers.
A. Deliver Monthly Activity Report, within 5 business days after the end of the accounting month.
B. Technical Papers and Documents Plans (specific deliverables and schedules developed per the direction of NOAA managers)
C. Preparing and/or presenting written and oral reports to working groups and NESDIS/NOAA leadership (as needed).
D. Summary of trip reports for all domestic trips along with the monthly activity report
E. Briefing and Conference Presentations using Microsoft PowerPoint
F. As requested by individual Technical Points of Contact, individual Staff weekly reports: The contractor staff members shall generate status reports every week via email to the TM or designate. The report shall include, as a minimum, a summary of the week’s highlights/accomplishments, milestones/schedule/deliverables, risks and customer meetings.

6. TRAVEL AND TRIP REPORTS
The Contractor shall be required to travel for the purpose of technical/status meetings and interfacing with program participants which includes other Government agencies and contractors. There are several primary sites where meetings will be held: White Sands, NM; Fairmont, WV; Aurora, Denver and Boulder, CO; Fairbanks, AK; Madison, WI; and Omaha, NE. Meetings may last two to five days in duration. Travel to other locations is also possible, including to local sites.

The Contractor shall plan, coordinate, and obtain Government approval for all travel. The Contractor will provide the Government a trip report. At a minimum the trip report should be a narrative of the visit’s important events. When multiple Contractors from the same Contract travel to the same event, a group trip report will suffice.

Any travel will be on a not-to-exceed basis and reimbursed in accordance with the Federal Travel Regulations. Costs for lodging, meals and incidental expenses incurred by Contractor personnel shall be considered to be reasonable and allowable to the extent they do not exceed on a daily basis the per diem rates set forth in the Federal Travel Regulations, General Services Administration. All cost in excess of the per diem shall be approved by the Government prior to the authorized departure date.

7. PLACE OF PERFORMANCE
The services to be provided under this task order shall be performed primarily at NOAA JPSS, Suitland, MD, and NASA JPSS, Silver Spring, MD. Secondary locations are NOAA Satellite Operations Facility, Suitland, MD, and the NOAA Silver Spring complex in Silver Spring, MD.

8. REMOTE WORK

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Remote work is authorized and will be monitored by the Administrative Contracting Officer’s Representative (ACOR) and must comply with the Department of Commerce Information Technology Requirement (CITR) 0008: Remote Access.

9. CONTRACTOR FURNISHED INFORMATION/EQUIPMENT
To be determined and approved by the Government in a case-by-case basis.

10. GOVERNMENT FURNISHED INFORMATION AND EQUIPMENT (GFI AND GFE) BASE SUPPORT
The Government will provide base support such as office space, equipment, supplies, and automated data processing equipment resources for contractor personnel while working in Government spaces.

11. GOVERNMENT VEHICLE USE
Staff provided under this contract will be permitted to use government vehicles for official government business related to work undertaken in support of this Task.

12. PERIOD OF PERFORMANCE
Base Period: 
Option Period I: 
Option Period II: 

13. TASK ORDER POINT OF CONTACT
Administrative Contracting Officer’s Representative (ACOR)

Alternate ACOR