

GODDARD SPACE FLIGHT CENTER		<b>TASK ORDER</b> (Instructions and Distribution on Reverse)		PAGE 1 OF 1
1. CONTRACTOR: SSAI	2. CONTRACT NO.: NNG12HP08C	3. TASK/REVISION NO.: Task Order #022		
4. JOB ORDER NO./PROJECT:	5. FLIGHT HARDWARE /SOFTWARE; CRITICAL GSA (IF, YES, OBTAIN BLOCK 16 CONCURRENCE): YES            X        NO	6. DESIGNATED FLIGHT ASSURANCE MGR.:		
7. DESCRIPTION OF WORK TO BE PERFORMED (OBJECTIVES OR RESULTS DESIRED):  OMI Cloud Algorithm Research, Development, and Implementation				
8. TASK DOCUMENTATION REQUIREMENTS/DELIVERABLE ITEMS:  (See Attached Task Order)				
9. PERFORMANCE/MILESTONE SCHEDULE:  May 1, 2015 – April 30, 2016				
10. QUALITY ASSURANCE REQUIREMENTS:  N/A				
11. TRAVEL, MATERIALS, ETC., KNOWN TO BE REQUIRED:  (See Attached Task Order)				
12. OTHER (FUNDING, NTE, HOURS, ETC.):  Total Cost: Fee: Total Price:                                \$266,403				
13. TASK ORIGINATOR/MONITOR/CODE/PHONE:  Joanna Joiner/614.0/4- 6247		18. THIS TASK ORDER IS ISSUED PURSUANT TO THE TERMS OF THE CONTRACT.   CONTRACTING OFFICER'S SIGNATURE/ DATE Ayana A. Briscoe		
14. BRANCH APPROVAL:	15. DIVISION CONCURRENCE:	Ayana A. Briscoe        Contracting Officer TYPED OR PRINTED NAME		
16. CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE:  Joel Susskind				
17. CONTRACTOR SIGNATURE:				

Science Systems and Applications, Inc.  
NNG12HP08C  
Task Order Statement of Work

Task Order Number: 022\_Rev1

Task Order Title: OMI Cloud Algorithm Research, Development, and Implementation

1.0 Task Monitor (TM):

Name: Joanna Joiner  
Organization: 614: Atmospheric Chemistry and Dynamics Laboratory  
Email Address: joanna.joiner@nasa.gov

2.0 Description of Work to be Performed

Subtask A:

- Implement improvements into the OMCLDRR algorithm (for OMI and OMPS) as appropriate and perform evaluation of the Aura/OMI and OMPS cloud products. This includes deriving and evaluating time-dependent soft calibration coefficients annually.
- Test and run LIDORT-RRS code to examine atmospheric absorption and effects of cloud, aerosol, and surface.
- Assist in developing algorithms to detect multiple cloud decks and retrieve cloud parameters using A-train satellite data.
- Assist or lead in writing journal and/or conference paper(s) describing the results.

Subtask B:

- Develop, test, and implement algorithms to retrieve fluorescence, CO<sub>2</sub>, and CH<sub>4</sub> using various instruments such as GOSAT TANSO-FTS, GOME-2, and SCIAMACHY in clear and cloudy conditions. Provide validation of retrievals by comparison to various other available data sets.
- Investigate applications and conduct comparisons of these data with carbon cycle models including estimation of Gross Primary Productivity (GPP) and detection of vegetation stress. Evaluate performance of GMAO model in estimating solar-induced fluorescence.
- Evaluate variability in the satellite fluorescence data sets due to viewing geometry and clouds
- Assist or lead in writing a journal and/or conference paper describing the results.

Subtask C:

- Analyze meteorological and satellite data and assist in model simulations related to blowing snow that may produce large enhancements of BrO at high latitudes as observed by the OMI satellite. Separate and remove the stratospheric component of the OMI total column BrO to isolate the tropospheric enhancements.

Assist or lead in writing journal and/or conference paper/posters describing the results.

3.0 Special Requirements: None

4.0 Performance/Milestone Schedule:

The SAS Contract Year 4 POP is May 01, 2015 - April 30, 2016

Effective period of performance for Revision 1: October 15, 2015 - April 30, 2016.

5.0 Deliverables/Reporting Requirements

- Contributions to scientific publications, workshops/conferences/symposia, both oral presentations and written contributions.
- Quarterly and annual reports.
- Testing and delivery of quality-controlled datasets (OMI OMCLDRR product delivery to OMI SIPS and application to NPP OMPS) and web-based material.
- Software and hardware documentation.
- Reports documenting participation in conferences, workshops, symposia, working groups and field activities.

6.0 Other Information Needed for Performance of Task

Travel by contractor staff may be required to attend science team meetings and workshops as well as scientific meetings. This may require domestic or foreign travels, which will be determined on a case by case basis. Meetings may include the GOSAT RA workshop in Japan and the AGU Fall Meeting in San Francisco.

7.0 Data Rights: N/A

8.0 Safety

Staff on this task shall comply with federal, state, local, and center safety regulations. This shall be accomplished through management emphasis, technical training, and personal responsibility. Staff shall participate in safety orientation and training in accordance with the contract Safety and Health Plan, and work within the requirements of that plan.

9.0 Risks

Contractor shall provide ongoing risk assessment and mitigation in performance of the Task Order. Priorities shall be re-evaluated as appropriate with the TM. Cost and schedule performance shall be assessed on a regular basis (no less frequently than monthly) and significant variations discussed and acted on in consultation with the TM and COR.

10.0 Proposed Cost and Fixed Fee

In accordance with Paragraph B.8 of the contract, propose the Cost and Fixed Fee amount.