



Partnerships for Commercial Optical Communication Systems

Announcement Number NASA-PCOCS-01

Release Date: December 18, 2015

**Proposal Executive Summaries Due:
January 22, 2016**

Innovative Technology Partnerships
Office
Goddard Space Flight Center

For Questions Regarding This Announcement:

GSFC-partnerships@mail.nasa.gov

AMENDMENTS AND HISTORY PAGE

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1. INTRODUCTION

1.1 Background

NASA encourages innovative and entrepreneurial efforts within the private sector to develop new space-related capabilities. These new capabilities may result in opportunities for industry to provide cost-effective commercial products and services to low Earth orbit and beyond for the Government and other customers. In pursuit of the goals of the National Space Policy and NASA's strategic plan, NASA is continuing its efforts to foster the development of new industrial space-related capabilities that will lead to education and job growth in science and engineering and spur economic growth as capabilities for new space markets are created.

NASA's Human Exploration and Operations Mission Directorate (HEOMD), Space Communication and Navigation Program (SCaN) has several demonstration initiatives such as Lunar Laser Communication Demonstration (LLCD) and Laser Communications Relay Demonstration (LCRD). NASA is in the early stages of developing new and innovative technologies in the area of optical communications. This new initiative is a collaboration activity to provide an opportunity to partner with NASA and is not intended to preclude ongoing or future partnerships discussions directly with NASA Centers or Mission Directorates for use of NASA personnel services or facilities. Entities with existing Agreements with NASA Centers or Mission Directorates are not required to respond to this Announcement to retain those Agreements. Participation in one initiative does not preclude participation in any of the others. Companies are free to interact with NASA in any or all of the initiatives that support their organization's goals.

1.2 Purpose

NASA is soliciting proposals from all interested U.S. private sector enterprises that wish to enter into a Reimbursable Cooperative Research and Development Agreements (CRADA) for Partnerships for Commercial Optical Communication Systems (PCOCS). The purpose of these agreements is to advance commercial space-related efforts by facilitating access to NASA's spaceflight resources including technical expertise, assessments, lessons learned, and data. With this activity, NASA intends to focus on facilitating the development of integrated optical communications space capabilities. Examples of these capabilities include, but are not limited to, ground station management; flight and ground optical systems; ground network deployment; and space and ground terminal facilities operations.

1.3 Objective

The objective of PCOCS Agreements is to advance private sector development of integrated space capabilities so that the emerging products or services are commercially available to government and non-government customers within approximately the next five years.

1.4 Approach

NASA plans to use the Federal Technology Transfer Act (FTTA), 15 U.S.C. § 3710a, to enter into one or more CRADAs. These CRADAs will serve as a mechanism for NASA and its partners to agree to a series of mutually beneficial activities, which are expected to be consistent with NASA's 2014 Strategic Plan. There must be specific, identifiable alignment with one or more elements of Strategic Goal 2, Objective 2.3 to optimize Agency technology investments, foster open innovation, and facilitate technology infusion, ensuring the greatest national benefit (see https://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf). This effort also aligns with the Presidential Memorandum of October 28, 2011 on Accelerating Technology Transfer and Commercialization of Federal Research in Support of High Growth Businesses (see <https://www.whitehouse.gov/the-press-office/2011/10/28/presidential-memorandum-accelerating-technology-transfer-and-commerciali>).

NASA work performed under PCOCS CRADAs will be on a cost reimbursable basis. Entering into this agreement will facilitate a Partner's access to NASA's spaceflight resources including technical expertise, assessments, lessons learned, data, facilities, services, and technologies. Access to NASA-patented technologies may require a separate license agreement. Access to NASA software may require a separate software usage agreement. Information provided under this call including, any trade secret or commercial or financial information which might be provided to NASA under this call by a non-Federal party, is exempted from disclosure under Freedom of Information Act (FOIA) pursuant to 15 USC §3710a(c)(7).

1.5 Schedule

NASA will commence its PCOCS activities with the participant upon execution of the CRADA, which is targeted for Winter 2016. The period of performance will be defined in each CRADA.

To provide flexibility to consider future PCOCS partnerships, at NASA's discretion, there may be opportunities for additional competitions under this Announcement, at which time, NASA will publish the notice in fedbizopps.

The Announcement schedule milestones are posted on the following PCOCS website: <http://partnerships.gsfc.nasa.gov/pcocs>. Participants are encouraged to refer regularly to this site for updates to the schedule and other current news and information.

2. INFORMATION FOR PARTICIPANTS

2.1 General Information

Agency:	National Aeronautics and Space Administration Goddard Space Flight Center	
Announcement Title:	Partnerships for Commercial Optical Communication System	
Announcement Number:	NASA-PCOCS-01	
Responsible Office:	Agreement: Innovative Technology Partnerships Office 8800 Greenbelt Rd. Bldg. 22 Rm. 290J Greenbelt, MD 2771	Technical: Exploration and Space Communication Projects Division/Code 450 8800 Greenbelt Rd. Bldg. 12 Rm. C200 Greenbelt, MD 20771
Proposal Executive Summaries Due Date:	January 22, 2016 5:00pm EST	
Point of Contact:	All questions shall be directed to the following NASA official:	
	Agreement: Enidia Santiago-Arce Tel.:301-286-5810 Fax:301-286-0301 Email: GSFC-partnerships@mail.nasa.gov	Technical: Michael Krainak Tel: 301-614-6767 Fax: 301- 614-6819 Email: michael.a.krainak@nasa.gov
Website:	The Announcement as well as current news and other information may be obtained and downloaded over the Internet at: http://partnerships.gsfc.nasa.gov/pcocs	

2.2 Eligible Participants

All U.S. private sector entities, may propose under this Announcement.

2.3 Compliance with U.S. Laws, Regulations and Policies

Proposals must comply with all applicable U.S. laws, regulations and policies, including but not limited to the following:

1. National Space Policy of the United States of America, June 2010
2. National Space Transportation Policy, November 2013
3. Commercial Space Act of 1998 51 U.S.C. 50101 et seq.)
4. Commercial Space Launch Act of 1984 (51 U.S.C. 50901 et seq.)

2.4 Intellectual Property

Under PCOCS, participants will retain intellectual property rights to the maximum extent allowed by law and regulation. Specifically:

1. NASA will not obtain rights in a participant's background intellectual property (data and inventions developed at private expense that existed or were made prior to, or outside of, the participant's agreement with NASA).
2. For privileged or confidential technical data (engineering, software, etc.) first produced by a partner and provided to NASA under a PCOCS agreement, NASA will disclose and use such data only for U.S. Government purposes.
3. For data first produced by NASA under a PCOCS agreement that would qualify as proprietary data if it had been obtained from the Partner, can be restricted upon request by the Partner for a period of up to five (5) years.
4. Under PCOCS agreements, generally ownership rights follow inventorship. For any inventions made by participants in performance of work under a PCOCS agreement, NASA will normally not obtain any rights to such inventions.
5. For any inventions made by NASA employees in performance of work under a PCOCS agreement, NASA will use reasonable efforts to grant the participant a license (on terms and conditions to be later negotiated).

A participant's proprietary data, both existing proprietary data and data arising from work conducted under this agreement which a participant considers proprietary, shall be appropriately marked by the participant and protected by NASA, consistent with law. Any trade secret or commercial or financial information which might be provided to NASA under this call by a non-Federal party is exempted from disclosure under Freedom of Information Act (FOIA) pursuant to 15 USC §3710a(c)(7).

Under a CRADA, NASA gives Collaborating Partner the option of acquiring an Exclusive License for the field of use in any Subject Invention Made in whole or in part by a NASA employee or the employee of a NASA Related Entity.

2.5 Title and Rights in Personal Property

The objective of the Partnerships for Commercial Space Capabilities (PCOCS) CRADAs is to advance private sector development of integrated space capabilities so that the emerging products or services are commercially available to government and non-government customers within approximately the next five years. In order to foster such development, NASA anticipates that title to all personal property acquired or developed by a Participant under PCOCS demonstrations will remain with the Participant.

2.6 Anticipated Funding

NASA does not intend to provide any funding to participants under these CRADAs. Participants are expected to secure all of the funding necessary to perform their obligations under the PCOCS agreements.

The Government's obligation to enter into and continue performance of agreements is contingent upon the availability of appropriated funds.

2.7 Use of Government Resources

As described in section 1, the purpose of the agreements is to advance commercial space-related capabilities by facilitating access to NASA's spaceflight resources including technical expertise, assessments, lessons learned, data, facilities, services, and technologies on a cost reimbursable basis and may require the negotiation of terms with NASA Goddard Space Flight Center or any other appropriate NASA Center or facility. In responding to this Announcement, NASA encourages participants to be as specific as possible about the Government resources and support that they are requesting.

Government resources, which shall be identified in the CRADA, shall be in two categories:

1. Base Support. This shall generally be the same for all partners and may consist of:
 - NASA partnership point of contact
 - NASA attendance at quarterly reviews of progress under the partnership
 - NASA observation of partner milestones
 - NASA review of partner-provided data
 - Access to NASA technical data, lessons learned, and expertise support.

2. Specific Support. This support will be unique to each partner and may be requested in the proposal. It may consist of specific:
 - NASA assessments, analyses, or other services
 - Use of NASA facilities
 - Use of NASA-developed technologies
 - Loan of NASA property.

Please note that NASA's use of the goods, services, facilities, or equipment shall have priority over the use proposed on this collaboration. Should a conflict arise, NASA in its sole discretion shall determine whether to exercise that priority. Likewise, should a conflict arise as between two or more Collaborating Parties, NASA, in its sole discretion, shall determine the priority as between those Collaborating Parties.

3. INSTRUCTIONS FOR PROPOSALS

3.1 Proposal Submittal

3.1.1 NASA will not issue paper copies of this Announcement. NASA reserves the right to select for negotiations all, some, or none of the proposals in response to this Announcement. NASA provides no funding for reimbursement of proposal-development costs. Proposals submitted in response to this Announcement will not be returned. It is the policy of NASA to treat all proposals as sensitive competitive information and to use the contents only for NASA purposes.

3.1.2 NASA will accept multiple proposals per private sector entity.

3.1.3 Proposal submittal shall occur in two parts:

Part 1: Companies shall submit an Executive Summary of no more than two pages by January 22, 2016 5:00p.m. EST for screening and ranking. The Executive Summary shall have the content specified in 3.2.2.

Part 2: NASA will notify each company whether its Executive Summary was among those most favorably evaluated. If so, the company shall have the opportunity to submit a full proposal due back to NASA approximately three weeks after notification. The exact due date and time will be specified in the notification. The proposal shall have the content defined in section 3.2 and shall not exceed 10 pages in length. This page limit does not apply to the Executive Summary, appendices, and the other excluded content identified in 3.1.4. The Executive Summary may be updated from the original version submitted in Part 1 to reflect the current content of the full proposal.

3.1.4 A page is defined as one side of a sheet, 8 ½" x 11", with at least one-inch margins on all sides, single spaced, using not smaller than 12-point type, with the exception of tables and figures, which may use 8-point type. Foldouts count as an equivalent number of 8 ½" x 11" pages. Any pages over the specified maximum will not be evaluated. Title pages, section and appendix cover pages, tables of contents, tabs, and acronym listings are excluded from the specified page counts.

3.1.5 Executive Summaries and full proposals shall be submitted by email. No paper submittals will be accepted. The requirements and process for submitting by email is defined in 3.1.6.

3.1.6 Email submissions, Executive Summaries and full proposals shall be emailed to: gsfc-partnerships@mail.nasa.gov. Each submittal shall be contained in a single email. The maximum size of each email submittal shall be 10 Mbytes. NASA shall confirm via email receipt of each email submittal. If the participant does not receive this confirmation within one business day, the participant shall call the Agreements Officer identified in section 2.1 to coordinate resubmittal. Participants are encouraged to email submittals at least two business

days prior to the deadline to allow time to resolve any transmission problems. NASA shall not be responsible for failure of emails to be received by NASA and for security of emailed submissions during transmission to NASA.

3.1.7 The Executive Summary and full proposal shall be in Microsoft Word or Portable Document File (PDF) format. In addition, Microsoft Excel files may be included in Appendix 2.

3.1.8 NASA reserves the right to select none of the proposals received by the Government after the published date and time for receipt has expired. Please refer to 3.1.6 for details about email submissions.

3.2 Proposal Content

3.2.1 Outline

All proposals shall be submitted using the following outline:

- Section I Executive Summary
- Section II Relevance to NASA
- Section III Business Approach
 - B1 - Business Overview
 - B2 - Development and Demonstration Plan
 - B3 - Compliance
 - B4 – Financial and Resource Acquisition Plan
 - B5 - Business Risk Management Plan
- Section IV Technical Approach
 - T1 - Capability Concept
 - T2 - Development, Production, and Demonstration
 - T3 - Safety and Mission Assurance
 - T4 - Technical Risk Management Plan
- Appendix 1 Proposed Milestones
- Appendix 2 Requested Government Resources
- Appendix 3 Supplemental Business Data

3.2.2 Section I: Executive Summary

The participant shall furnish an Executive Summary of up to two pages which shall summarize:

- Capabilities planned by the company,
- Purpose of the proposed partnership,
- Relevance to NASA as defined in 3.2.3,
- Business and technical approach, including why NASA should have confidence in the company's ability to complete the proposed capabilities, and
- Government resources requested under the proposed partnership.

3.2.3 Section II: Relevance to NASA

The participant shall describe how the capability may benefit NASA as part of the implementation of NASA's 2014 Strategic Plan, Strategic Goal 2, Objective 2.3 (see http://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf). The participant shall also describe how the capability meets the PCOCS objective to advance private sector development of integrated space capabilities so that the emerging products or services are commercially available to government and non-government customers within approximately the next five years, and consistent with the Presidential Memorandum of October 28, 2011 on Accelerating Technology Transfer and Commercialization of Federal Research in Support of High Growth Businesses (see <https://www.whitehouse.gov/the-press-office/2011/10/28/presidential-memorandum-accelerating-technology-transfer-and-commerciali>).

3.2.4 Section III: Business Approach

This section shall describe the participant's approach for operating a sustained entity that will supply the proposed capability to the market. Participants shall provide sufficient information to establish confidence in its plan. Non-profit entities should answer the questions where applicable, such as by addressing their finance plans in terms of obtaining donations and revenue.

B1. Business Overview

This section shall provide an overview of the participant's business as it relates to the proposed capability(ies) and shall include the following:

- Business strategy,
- Market,
- Products and services,
- Management team (resumes of key personnel may be included in Appendix 3).

B2. Development Plan

The participant shall summarize its capability development plan. This plan shall include the following:

- A plan and schedule for developing, producing, and demonstrating (if proposed) the planned capability(ies),
- Identification of key partner resources such as personnel, facilities, intellectual property, and other assets required for development.
- Any major partners and suppliers including respective roles and contributions to the project and status of the relationship. Partners and suppliers can include for-profit, non-profit, and government entities.
- An overview of requested Government support, including description and approximate timing. Details shall be provided in Appendix 2 (see 3.2.7).

If the participant has any proposed or current Government relationships, such as contracts or agreements, that are directly related to the development of the proposed capability, the participant shall identify them and describe how they are related.

B3. Compliance

The participant shall describe compliance with applicable federal laws, regulations, and policies specified in section 2.3.

B4. Financial and Resource Acquisition Plan

The participant shall describe the plan to acquire the resources needed to complete the development of the capability as identified in section B2. This should include:

- Identification of the participant's existing resources that will be committed under the CRADA including capital and other resources from itself and its partners.
- Estimate of total cost for capability development, demonstration (if planned), and operational readiness. As a minimum, this estimate shall identify the cost for each major element for each program phase (e.g. development, production, and demonstration) in current-year dollars. The participant shall identify which of these costs it plans to incur during the term of the CRADA and which will be incurred after the CRADA until the capability is operationally ready. Supporting cost data may be included in Appendix 3.
- Phased plan to acquire the additional resources needed beyond what the participant currently controls through operational readiness. To support its financing plan, the participant may provide historical and pro-forma financial statements, letters of intent, and other supporting business data in Appendix 3.

B5. Business Risk Management Plan

The participant shall describe the most significant business risks associated with the effort and its plans to manage them.

3.2.5 Section IV: Technical Approach

This section shall describe the participant's proposed technical approach for developing its capability. Participants shall provide sufficient information to establish confidence in its plan.

T1. Capability Concept

The participant shall describe the capability's key features, top-level requirements, system design concept, and concept of operations.

T2. Development, Production, and Demonstration

The participant shall describe the elements of the capability that are either already operational or commercially available and elements that are under development or to be developed, including an indication of the Technology Readiness Level (TRL) for each element as defined at www.hq.nasa.gov/office/codeq/trl/trl.pdf. For elements that require development, the participant shall describe work completed to date. The participant shall describe the technical approach for completing development and production of the capability and for conducting any planned demonstrations. Do not repeat programmatic plans provided in section B2.

T3. Safety and Mission Assurance (S&MA)

The participant shall summarize its approach for safety, reliability, maintainability, supportability, quality, software assurance, and risk management. If humans are intended to fly in space as part of the capability, the participant shall describe its approach to human rating.

T4. Technical Risks

The participant shall describe the most significant technical risks associated with the effort, and its plans to manage them.

3.2.6 Appendix 1: Proposed Milestones

The participant shall provide a list of proposed capability development and demonstration milestones. These shall be the milestones which the participant proposes to incorporate into its CRADA.

Each milestone shall include a descriptive title, objective success criteria, and planned achievement dates (month and year). Milestones should represent significant technical and business progress in the program. At least one milestone per calendar quarter is recommended. The participant shall assume that all base support and specific support government resources which it identified in Appendix 2 are provided.

3.2.7 Appendix 2: Proposed Government Resources

The participant shall identify the Government resources requested for its capability development effort as described in paragraph 2.7 of this Announcement. If specific support is requested, the

participant may define phases of support and may provide details of only the first phase. In that case, NASA will not commit to specific support in later phases but may negotiate additional support with the partner prior to the conclusion of the previous phase.

3.2.8 Appendix 3: Supplemental Business Data

Participants may provide resumes of key personnel and supplemental business data in this appendix as identified in sections B1 and B4 of paragraph 3.2.4.

4. PROPOSAL EVALUATION AND SELECTION

4.1 Process

4.1.1 The evaluation process NASA intends to use for the selection of the PCOCS CRADAs is described below.

4.1.2 All proposals will be screened to determine whether they comply with the eligibility criteria (section 2.2) and proposal instructions (section 3) of this Announcement. Proposals that are not compliant may be rejected without further review.

4.1.3 The first step of the evaluation process will be a ranking of Executive Summaries that are compliant with this Announcement based on the alignment and relevance of the proposed capability with NASA's Strategic Plan Goal 2, Objective 2.3, the Presidential Memorandum of October 28, 2011, the feasibility of the participant's business and technical approach, and the feasibility of the requested NASA support. Highest priority will be placed on the most relevant and feasible proposals which help advance NASA's technology development goals in a complementary manner. The participants whose Executive Summaries are most favorably ranked will receive an invitation from NASA to deliver a full proposal for the second step.

4.1.4 During the second step of the process, NASA will evaluate the full proposals that are compliant with this Announcement to assess the level of effectiveness of the proposed capability in meeting NASA's Strategic Plan Objective 2.3, NASA's Strategic Space Technology Investment Plan (SSTIP), and the PCOCS objective. The effectiveness assessment shall consider the degree to which NASA could potentially benefit from the proposed capability by reducing cost or improving the availability or performance of space capabilities relevant to NASA's SSTIP. NASA will also evaluate the levels of confidence in the business and technical approaches. NASA may ask questions via teleconference during the review process to obtain clarification of information provided in the proposals. Those proposals most favorably evaluated will be selected for the third step.

4.1.5 The third step of the process will be teleconferences and/or on-site due diligence meetings and negotiations of CRADAs with participants whose proposals were most favorably evaluated. Participants will be notified of selection for due diligence at least one week in advance of the first teleconference or on-site meeting. NASA will provide the participant with a list of questions resulting from the initial evaluation. During the diligence meetings, participants will have the opportunity to present their overall business approach, technical approach, response to the questions provided by NASA, and any proposed changes to the CRADA in Appendix A. NASA will work with the participants to resolve any issues associated with the CRADA and negotiate toward an agreement on terms. NASA may ask questions during the diligence meetings to obtain verbal clarification of information provided in the proposals or presentation materials. At the conclusion of this step, NASA shall review and revise, if indicated, the evaluation results of the previous step.

4.2 Selection and Award

4.2.1 After completing due diligence and CRADA negotiations, NASA will present the results of the proposal evaluation to the Selection Official. The Selection Official will compare the proposals against one another and select a portfolio of one or more participants whose proposals are most effective, have the highest confidence, and can be supported by NASA within available resources.

4.2.2 Upon selection, NASA will enter into negotiation with each selected participant on the proposed CRADA. NASA reserves the right to select for execution all, some, or none of the proposals it receives in response to this Announcement. The competitive process will conclude with execution of a CRADA between NASA and the selected participant(s).

4.3 Personnel

The Government will use selected contractor support personnel to assist in providing technical and business expertise in the evaluation of executive summaries and proposals. All contractor involvement in the evaluation process will be bound by appropriate conflicts of interest provisions and contract clauses to protect proprietary and competition sensitive information.

By submitting an Executive Summary or proposal under this Announcement, the participant is deemed to have consented to release of data in its proposal to these NASA contractors supporting evaluation of proposals.

5. LIST OF APPENDICES

Appendix A: Draft CRADA

Appendix A: Draft Cooperative Research and Development Agreement (CRADA)

The following is a draft CRADA for the PCOCS agreements. This draft is provided as an example of the most likely content of an CRADA between the parties. The final PCOCS CRADAs entered into pursuant to this competition will be the subject of final negotiations between NASA and a participant. Questions or comments on the draft CRADA may be submitted to the PCOCS Agreements Officer.

REIMBURSABLE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
GODDARD SPACE FLIGHT CENTER
AND
PARTNER
FOR
DEVELOPEMNT OF COMMERCIAL COMMUNICATION OPTICAL SYSTEM

ARTICLE 1. AUTHORITY AND PARTIES

In accordance with the Federal Technology Transfer Act (FTTA), 15 U.S.C. § 3710a, this CRADA is entered into by the NASA Goddard Space Flight Center located at 8800 Greenbelt Road, Greenbelt, MD 20771 (hereinafter referred to as “NASA” or “GSFC”) and <INSERT PARTNER NAME HERE>, located at <INSERT PHYSICAL ADDRESS> (hereinafter referred to as “Collaborating Party” or “TBD”). NASA and Collaborating Party may be individually referred to as a “Party” and collectively referred to as the “Parties.”

ARTICLE 2. PURPOSE AND NASA'S COMMITMENT

[This section will broadly describe the purpose of the proposed PCOCS collaboration between NASA and the Partner. It will include a summary of the information included in the participant’s Executive Summary as described in section 4.2 of the PCOCS Announcement. In addition to the purpose of the proposed partnership, this section will also broadly summarize the participant’s capabilities and how the partnership aligns with NASA’s Strategic Plan.]

ARTICLE 3. RESPONSIBILITIES

A. NASA will use reasonable efforts to:

[This section will incorporate the Government resources requested by PCOCS participants for their capability development effort under this CRADA. This section will include Base Support and any Specific Support requested by the participant and agreed to by NASA. Section 3.7 of the PCOCS Announcement provides details to participants regarding access to Government provided resources. The proposed use of Government resources should track the participant-proposed milestones in Article 4 that the Government resources are utilized to support.]

B. Partner will use reasonable efforts to:

[This section will incorporate the resources provided by the PCOCS participants toward their capability development effort under this CRADA. These responsibilities should track participant-proposed milestones in Article 4.]

ARTICLE 4. SCHEDULE AND MILESTONES

The planned major milestones for the activities defined in the "Responsibilities" Article are as follows:

[This section will incorporate the Participant proposed capability development and demonstration milestones. Each milestone shall include a descriptive title, objective success criteria, and planned achievement dates (month and year). Milestones should represent significant technical and business progress in the program. At least one milestone per calendar quarter is recommended.]

- | | |
|--|---|
| 1. [Identified capability development or demonstration milestone.] | [Planned achievement date for milestone.] |
| 2. [Identified capability development or demonstration milestone.] | [Planned achievement date for milestone.] |
| 3. [Identified capability development or demonstration milestone.] | [Planned achievement date for milestone.] |

ARTICLE 5. FINANCIAL OBLIGATIONS

A. Collaborating Party agrees to reimburse NASA an estimated cost of (*\$ total dollars*) for NASA to carry out its responsibilities under this CRADA. In no event will NASA transfer any U.S. Government funds to Collaborating Party under this CRADA. Payment must be made by Collaborating Party in advance of initiation of NASA's efforts. [*For incremental payments, insert payment schedule.*]

B. Payment shall be payable to the National Aeronautics and Space Administration through the NASA Shared Services Center (NSSC) (*choose one form of payment*): (1) U.S. Treasury FEDWIRE Deposit System, Federal Reserve Wire Network Deposit System; (2) pay.gov at www.nssc.nasa.gov/customerservice (select "Pay NASA" from the Quick Links to the left of the page); or (3) check. A check should be payable to NASA and sent to: NASA Shared Services Center; FMD – Accounts Receivable; For the Accounts of: GSFC Bldg. 1111, C Road; Stennis Space Center, MS 39529. All payments and other communications regarding this CRADA shall reference the Center name, title, date, and number of this CRADA.

C. NASA will not provide services or incur costs beyond the existing payment. Although NASA has made a good faith effort to accurately estimate its costs, it is understood that NASA provides no assurance that the proposed effort under this CRADA will be accomplished for the above estimated amount. Should the effort cost more than the estimate, Collaborating Party will be advised by NASA as soon as possible. Collaborating Party shall pay all costs incurred and has the option of canceling the remaining effort, or providing additional funding in order to continue the proposed effort under the revised estimate. Should this CRADA be terminated, or the effort completed at a cost less than the agreed-to estimated cost, NASA shall account for any unspent funds within 1 year after completion of all effort under this CRADA, and promptly thereafter return any unspent funds to Collaborating Party.

D. Notwithstanding any other provision of this CRADA, all activities under or pursuant to this CRADA are subject to the availability of funds, and no provision of this CRADA shall be interpreted to require obligation or payment of funds in violation of the Federal Technology Transfer Act (15 U.S.C. § 3710a(b)(3)(A)) or the Anti-Deficiency Act (31 U.S.C. § 1341).

ARTICLE 6. ALLOCATING NASA RESOURCES

Any schedule or milestone in this CRADA is estimated based upon the Parties' current understanding of the projected availability of NASA goods, services, facilities, or equipment. In the event that NASA's projected availability changes, Collaborating Party shall be given reasonable notice of that change, so that the schedule and milestones may be adjusted accordingly. The Parties agree that NASA's use of the goods, services, facilities, or equipment shall have priority over the use planned in this CRADA. Should a conflict arise, NASA in its sole discretion shall determine whether to exercise that priority. Likewise, should a conflict arise as between two or more Collaborating Parties, NASA, in its sole discretion, shall determine the priority as between those Collaborating Parties. This CRADA does not obligate NASA to seek alternative government property or services under the jurisdiction of NASA at other locations.

ARTICLE 7. NONEXCLUSIVITY

This CRADA is not exclusive; accordingly, NASA may enter into similar CRADAs for the same or similar purpose with other private or public entities

ARTICLE 8. LIABILITY AND RISK OF LOSS

A. Collaborating Party hereby waives any claims against NASA, its employees, its related entities, (including, but not limited to, contractors and subcontractors at any tier, grantees, investigators, customers, users, and their contractors and subcontractors, at any tier) and employees of NASA's related entities for any injury to, or death of, Collaborating Party employees or the employees of Collaborating Party's related entities, or for damage to, or loss of, Collaborating Party's property or the property of its related entities arising from or related to activities conducted under this CRADA, whether such injury, death, damage, or loss arises through negligence or otherwise, except in the case of willful misconduct.

B. Collaborating Party further agrees to extend this unilateral waiver to its related entities by requiring them, by contract or otherwise, to waive all claims against NASA, its related entities, and employees of NASA and employees of NASA's related entities for injury, death, damage, or loss arising from or related to activities conducted under this CRADA.

ARTICLE 9. INTELLECTUAL PROPERTY-DATA RIGHTS

1. General

(a) "Cooperative Work" means research, development, engineering, or other tasks performed

under this CRADA by NASA or Collaborating Partner working individually or together pursuant to the Responsibilities set forth in Section 3 and/or in the SOW.

(b) “Create” in relation to any copyrightable work means when the work is fixed in any tangible medium of expression for the first time, as provided for at 17 U.S.C. §101.

(c) “Data” means recorded information, regardless of form, the media on which it is recorded, or the method of recording.

(d) “Government Purpose” means the right of the Government to use, duplicate, or disclose Data, in whole or in part, and in any manner, and to make and use Inventions for Government purposes only, and to have or permit others to do so for Government purposes only. Government Purpose includes competitive procurement, but does not include the right to have or permit others to use Data or Inventions for commercial purposes.

(e) “Non-Subject Data” means any Data that are not Subject Data.

(f) “Proprietary Data” means Data embodying trade secrets developed at private expense or commercial or financial information that is privileged or confidential, and that includes a restrictive notice, unless the Data are:

(i) known or available from other sources without restriction;

(ii) known, possessed, or developed independently, and without reference to the Proprietary Data;

(iii) made available by the owners to others without restriction; or

(iv) required by law or court order to be disclosed.

(g) “Related Entity” means a contractor, subcontractor, grantee, or other entity having a legal relationship with NASA or Collaborating Party, that is assigned, tasked, or contracted to perform activities under this Agreement.

(h) “Subject Data” means that Data first produced in the performance of the Cooperative Work.

2. Data exchanged under this CRADA are exchanged without restriction except as otherwise provided herein.

3. Notwithstanding any restrictions provided in this Article, the Parties are not restricted in the use, disclosure, or reproduction of Data provided under this Agreement that meets one of the exceptions set out in the definition of “Proprietary Data” set forth in this Agreement. If a Party believes that any exceptions apply, it shall notify the other Party before any unrestricted use, disclosure, or reproduction of the Data.

4. The Parties will not exchange preexisting Proprietary Data under this Agreement unless authorized herein or in writing by the owner.

5. If the Parties exchange Data having a notice that the Receiving Party deems is ambiguous or

unauthorized, the Receiving Party shall tell the Providing Party. If the notice indicates a restriction, the Receiving Party shall protect the Data under this Article unless otherwise directed in writing by the Providing Party.

6. The Data rights herein apply to the employees and Related Entities of Collaborating Party. Collaborating Party shall ensure that its employees and Related Entity employees know about and are bound by the obligations under this Article.

7. Disclaimer of Liability. NASA is not restricted in, or liable for, the use, disclosure, or reproduction of Data without a restrictive notice as provided in the definition of “Proprietary Data.”

8. Collaborating Party may use the following or a similar restrictive notice as provided in the definition of “Proprietary Data.”

Proprietary Data Notice

The Collaborating Party should mark the Title or Cover Page of any document containing Proprietary Data with the following or a similar legend: “The data herein include Proprietary Data and are restricted under the Data Rights provisions of Cooperative Research and Development Agreement.”

Collaborating Party should also mark each page containing Proprietary Data with the following or a similar legend: “Proprietary Data – Use and Disclose Only under the Notice on the Title or Cover Page.”

9. Data First Produced by Collaborating Party Under this Agreement.

If Data first produced by Collaborating Party or its Related Entities under this Agreement is given to NASA, and the Data is Proprietary Data, and it includes a restrictive notice, NASA will use reasonable efforts to protect it. The Data will be disclosed and used (under suitable protective conditions) only for U.S. Government purposes.

The following are PARTNER Materials (as defined below) and subject to the ownership and confidentiality provisions of this CRADA:

[INSERT LIST OF MATERIALS OR NONE]

The following are NASA Materials (as defined below) and subject to the ownership and confidentiality provisions of this CRADA:

[INSERT LIST HERE OR NONE]

10. Data First Produced by NASA Under this Agreement.

If Collaborating Party requests that Data first produced by NASA (solely or jointly with the Collaborating Party) under this Agreement be protected, and NASA determines it would be Proprietary Data if obtained from Collaborating Party, NASA, may, upon request, use reasonable efforts to mark it with a restrictive notice and protect it after its development for the period of time

specified in the phase under which the Data is produced. During this restricted period the Data may be disclosed and used (under suitable protective conditions) for U.S. Government purposes only, and thereafter for any purpose. Collaborating Party may not disclose the Data without NASA's written approval during the restricted period. The restrictions placed on NASA do not apply to Data disclosing a NASA-owned invention for which patent protection is being considered.

11. Copyrights.

1. Data exchanged with a copyright notice and no indication of restriction as provided in the definition of "Proprietary Data" of this Article (i.e., Data has no restrictive notice) is presumed to be published. The following licenses apply:

(a) For Non-Subject Data, the receiving Party and others acting on its behalf, are granted a royalty-free, nonexclusive, irrevocable license to reproduce, prepare derivative works, distribute, perform, and display only for carrying out the receiving Party's responsibilities under this Agreement

(b) For Subject Data, except as otherwise provided in paragraphs herein, such as the Inventions and Patent Rights clause of this Agreement for protection of reported inventions, the receiving Party and others acting on its behalf are granted a royalty-free, nonexclusive, irrevocable license to reproduce, prepare derivative works, distribute, perform, and display such copyrighted works for any purpose.

2. Subject Data Created solely by a Party. Ownership of copyrights for works based on or containing Subject Data and Created by employees of (or for hire by) a sole Party in the course of performance of work under this Agreement are retained by said sole Party. In the case of works Created solely by NASA employee(s), there is no copyright in the United States, however there is copyright in such employee works in countries outside of the United States.

3. Joint works. Ownership of copyrights for joint works (including software) Created by employees of (or for hire by) the Parties in the course of performance of work under this Agreement are retained jointly by the Parties, without the obligation to account for royalties.

4. Software. The Party creating software in the course of the performance of work under this Agreement will provide the other Party with the source code, object code, and minimum support documentation needed by a competent user to use the software; provided that such software and documentation shall be treated in accordance with any restrictive notices thereon. NASA software and related Data will be provided to Cooperating Party under a separate Software Usage Agreement (SUA). Partner shall use and protect the related Data in accordance with this Article. Unless the SUA authorizes retention, or Cooperating Party enters into a license under 37 C.F.R. Part 404, the related Data shall be disposed of as NASA directs:

12. Publication of Results.

The National Aeronautics and Space Act (51 U.S.C. § 20112) requires NASA to provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof. As such, NASA may publish unclassified and non-Proprietary Data resulting from

work performed under this CRADA. The Parties will coordinate publication of results allowing a reasonable time to review and comment.

13. Data Disclosing an Invention.

If the Parties exchange Data disclosing an invention for which patent protection is being considered, and the furnishing Party identifies the Data as such when providing it to the receiving Party, the receiving Party shall withhold it from public disclosure for a reasonable time, not to exceed one year.

14. Data Subject to Export Control.

Whether or not marked, technical data subject to the export laws and regulations of the United States provided to Collaborating Partner under this CRADA must not be given to foreign persons or transmitted outside the United States without proper U.S. Government authorization.

ARTICLE 10. INVENTION AND PATENT RIGHTS

General.

1. Definitions. The following definitions are applicable to Article 10.

(a) “Exclusive License” means the grant by the owner of an invention of the exclusive right to make, use, or sell the invention.

(b) “Invention” means any invention or discovery that is or may be patentable or otherwise protected under Title 35, United States Code, or a novel variety of plant that is or may be patentable under the Plant Variety Protection Act. (15 U.S.C. § 3703(7)).

(c) “Invention Disclosure” means the document identifying and describing an Invention and the Making of such Invention.

(d) “Made” when used in conjunction with any Invention means the conception or first actual reduction to practice of such Invention. (15 U.S.C. § 3703(8)).

(f) “Non-Subject Invention” means any Invention that is not a Subject Invention.

(g) “Patent Application” means an application for patent protection for an Invention with any domestic or foreign patent-issuing authority.

(h) “Related Entity(ies)” means an employee, contractor, subcontractor, grantee, or other entity, at all levels, having a legal relationship with NASA or Collaborating Partner, that is assigned, tasked, or contracted to perform activities under this Agreement.

(i) “Subject Invention” means any Invention Made in the performance of the Cooperative Work.

2. NASA has determined that 51 U.S.C. § 20135(b) does not apply to this Agreement. Therefore, title to inventions made (conceived or first actually reduced to practice) under this Agreement remain with the respective inventing party(ies). No invention or patent rights are exchanged or

granted under this Agreement, except as provided herein.

3. Collaborating Partner shall ensure that its Related Entities know about and are bound by the obligations under this Article.

4. NASA will advise the Collaborating Partner in the event NASA intends to use Related Entities to fulfill some or all of its obligations under the CRADA.

Disclosure of Subject Inventions.

1. **Timely Invention Disclosure by Inventors.** Each Party shall instruct its Related Entities to submit an Invention Disclosure to that Party within ninety (90) calendar days of making a Subject Invention, unless a different time period is required by circumstances. In the case of a Subject Invention Made jointly by inventors from both Parties or such Parties' Related Entities, the employee-inventor(s) shall submit an Invention Disclosure to their respective employer.

2. **Obligation to Provide Invention Disclosures to the Other Party.** Each Party shall provide the other Party with a copy of each Invention Disclosure reporting a Subject Invention within sixty (60) calendar days of receiving the Invention Disclosure.

3. **Protection of Reported Subject Inventions.** When Subject Inventions are reported and disclosed between the Parties in accordance with the provisions of this clause, the receiving Party agrees to withhold such reports or disclosures from public access for a reasonable time (presumed to be 1 year unless otherwise mutually agreed or unless such information is restricted for a longer period herein) in order to facilitate the allocation and establishment of the invention and patent rights under these provisions.

4. **Additional Disclosure and Reporting Obligations.** Each Party shall instruct its employees to submit a written disclosure to that Party of (1) solutions to technical problems and (2) unique increases to the general body of knowledge that result from the Cooperative Work but do not qualify as Subject Inventions. Each Party shall provide the other Party with a copy of each such written disclosure within sixty (60) calendar days of receiving the written disclosure from its employee.

Ownership of Inventions.

1. **Ownership of Subject Inventions.** Each Party shall be entitled to own the Subject Inventions of its employees. For any Invention Made jointly by employees of the Parties, each Party shall have ownership of the Subject Invention in the form of an undivided interest.

2. **Ownership of Non-Subject Inventions.** Each Party owns its Non-Subject Inventions.

Filing of Patent Applications.

1. **Inventions by One Party.**

(a) For Subject Inventions Made solely by employees of one Party, said Party has responsibility for filing Patent Applications on said Subject Inventions subject to the election to file set forth in

Section 10.2.4 below. Each Party shall notify the other Party within 30 calendar days of filing a Patent Application on any such Subject Inventions and shall provide the other Party with copies of the Patent Applications it files on any Subject Invention.

(b) Collaborating Partner agrees to include the following statement in any patent application it files for a Subject Invention Made by its employees:

The invention described herein may be manufactured and used by or for the U.S. Government for U.S. Government purposes without the payment of royalties thereon or therefore.

2. Joint Inventions.

(a) In the case of a Subject Invention jointly Made by employees of both Parties, the Parties shall confer and agree as to which Party will file any Patent Application. Each Party shall cooperate with the other Party to obtain inventor signatures on Patent Applications, assignments or other documents required to secure patent protection.

(b) Each Party shall provide the other Party with copies of the Patent Applications it files on any Subject Invention jointly Made by employees of both Parties, along with the power to inspect and make copies of all documents retained in the official Patent Application files by the applicable patent office.

(c) Collaborating Partner agrees to include the following statement in any Patent Application it files for an invention Made jointly between NASA employees (or employees of a NASA Related Entity) and employees of Collaborating Partner:

The invention described herein may be manufactured and used by or for the U.S. Government for U.S. Government purposes without the payment of royalties thereon or therefor.

3. Election to File. If either Party elects not to file a Patent Application on a Subject Invention, it must advise the other Party within ninety (90) calendar days from the date the Subject Invention is reported or sixty (60) calendar days prior to any statutory bar date related to a Subject Invention, whichever date occurs first. Thereafter, the other Party may elect to file a Patent Application on such Subject Invention and, upon request by the other Party, the non-electing Party shall assign the Subject Invention to the other Party and shall cooperate with the other Party to obtain inventor signatures on Patent Applications, assignments or other documents required to secure patent protection. In the event neither of the Parties elects to file a Patent Application on a Subject Invention, either or both (if a joint invention) may, after providing written notice to the other Party, release the right to file to the inventor(s), subject to a nonexclusive, nontransferable, irrevocable, paid-up license to practice the Subject Invention or have the Subject Invention practiced on its behalf.

4. Patent Expenses. The expenses associated with the filing of Patent Applications, as specified herein, shall be borne by the Party filing the Patent Application. The fees payable to the U.S. Patent and Trademark Office in order to maintain the patent's enforcement will be payable by the owner of the patent at that Party's option.

5. If either Party determines that it will not continue to prosecute or maintain a patent for a

Subject Invention, either in the U.S. or in foreign countries, the filing Party shall so inform the other Party so that the other Party may make the determination whether to continue to prosecute for or maintain patent protection. If the non-filing Party makes the determination to continue to prosecute for or maintain patent protection and so notifies the filing Party, the filing Party shall assign title to the Subject Invention to the non-filing Party and the non-filing Party shall be responsible for all costs associated with such continued filing, prosecution or maintenance.

Licenses.

1. **Limitation on Assignment of Licenses Granted Under This Agreement.** No license of a Subject Invention granted under this Agreement shall be assigned except to the successor in interest of that part of Collaborating Partner's business to which such license pertains.

2. **License Reservation.** Any license of a Subject Invention granted to Collaborating Partner pursuant to this Agreement will be subject to the reservation of the following rights:

(a) As to Subject Inventions made solely or jointly by NASA employees, NASA reserves the irrevocable, royalty-free right of the Government of the United States to practice the invention or have the invention practiced on behalf of the United States or on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.

(b) As to Subject Inventions made solely or jointly by employees of a NASA Related Entity, NASA reserves the rights as set forth in paragraph (a) above, as well as the revocable, nonexclusive, royalty-free license in the Related Entity as set forth in 14 C.F.R. § 1245.108 or 37 C.F.R. § 401.14 (e), as applicable.

3. **Subject Inventions.**

(a) **Nonexclusive License to Subject Inventions.**

(i) Collaborating Partner grants to the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice Subject Inventions Made by employees of Collaborating Partner and, where Collaborating Partner has such rights, Subject Inventions Made by employees of Collaborating Partner Related Entities, and to have such Subject Inventions practiced throughout the world by or on behalf of the Government for Governmental purposes.

(ii) NASA grants to Collaborating Partner a nonexclusive, nontransferable, irrevocable, paid-up license to practice Subject Inventions Made by employees of NASA and, where NASA has such rights, Subject Inventions Made by employees of NASA Related Entities. Such license shall not permit Collaborating Partner to grant sublicenses.

(b) **Option for Exclusive License to Subject Inventions.**

(i) **Option.** NASA gives Collaborating Partner the option of acquiring an Exclusive License for the field of use described in paragraph (iii) below in the Government's rights in any Subject Invention Made in whole or in part by a NASA employee or the employee of a NASA Related Entity. In order to exercise this option, Collaborating Partner must notify NASA in writing within

ninety (90) calendar days of notification of the filing of a patent application on the Subject Invention by NASA.

(ii) License Execution. Each license for a Subject Invention shall be implemented through a written Exclusive License agreement executed by both Parties. The license shall be for reasonable consideration to be negotiated for each licensed Subject Invention. Collaborating Partner must execute the Exclusive License to the Subject Invention within one hundred twenty (120) calendar days of election to exercise the option, or the Invention may be made available for licensing to the public in accordance with 37 CFR Part 404. Any Exclusive License granted by NASA in a Subject Invention is subject to the statutorily required reservation by the Government of a nonexclusive, irrevocable, paid-up license to practice the Subject Invention or have that Subject Invention practiced throughout the world by or on behalf of the Government and statutory march-in rights in accordance with 15 U.S.C. 3710a(b)(1).

(iii) Field of Use. [LIST HERE IF NEEDED]

(c) Cancellation of Exclusive License Option to Subject Inventions. NASA may cancel any option for an Exclusive License to a Subject Invention granted under this Agreement in the event that:

- (i) Collaborating Partner fails to make any payment as agreed in this Agreement; or
- (ii) Collaborating Partner fails to perform according to the responsibilities set forth in the Responsibilities Article of this Agreement; or
- (iii) Collaborating Partner materially breaches any other provision of this Agreement and fails to cure such breach with thirty (30) days following notices received from NASA; or
- (iv) Collaborating Partner becomes a foreign owned, controlled, or influenced (FOCI) organization that does not qualify under the requirements of Executive Order 12591, Section 4(a); or
- (v) The Agreement is terminated unilaterally by Collaborating Partner.

4. Non-Subject Inventions.

(a) Licenses to Non-Subject Inventions. Except as expressly provided for herein, this Agreement does not grant any Party a license, express or implied, to any Non-Subject Invention.

(b) Preexisting Non-Subject Inventions Pertinent to the Cooperative Work.

(i) Non-Subject Inventions pertinent to the Cooperative Work that are specifically identified as property of NASA and for which a patent application has been filed prior to the effective date of this Agreement include but are not limited to the following:

[INSERT LIST HERE OR NONE]

(ii) Non-Subject Inventions pertinent to the Cooperative Work that are specifically identified as property of Collaborating Partner include but are not limited to the following:

[INSERT LIST HERE OR NONE]

(c) Research License. Each Party shall allow the other Party to practice any of its Non-Subject Inventions listed above for the purpose of performing the Cooperative Work. No license, express or implied, for commercial application(s) is granted to either Party in Non-Subject Inventions by performing the Cooperative Work. For commercial application(s) of Non-Subject Inventions, a license must be obtained from the owner.

ARTICLE 12. NASA NAME AND INITIALS

Collaborating Party shall not use “National Aeronautics and Space Administration” or “NASA” in a way that creates the impression that a product or service has the authorization, support, sponsorship, or endorsement of NASA, which does not, in fact, exist. Except for releases under the “Release of General Information to the Public and Media” clause, Collaborating Party must submit any proposed public use of the NASA name or initials (including press releases and all promotional and advertising use) to the NASA Assistant Administrator for the Office of Communication or designee (“NASA Communications”) for review and approval. Approval by NASA Communications shall be based on applicable law and policy governing the use of the NASA name and initials.

Use of NASA emblems (i.e., NASA Seal, NASA Insignia, NASA logotype, NASA Program Identifiers, and the NASA Flag) is governed by 14 C.F.R. Part 1221. Collaborating Party must submit any proposed use of the emblems to NASA Communications for review and approval.

ARTICLE 13. DISCLAIMER OF WARRANTY

Goods, services, facilities, or equipment provided by NASA under this CRADA are provided “as is.” NASA makes no express or implied warranty as to the condition of any such goods, services, facilities, or equipment, or as to the condition of any research or information generated under this CRADA, or as to any products made or developed under or as a result of this CRADA including as a result of the use of information generated hereunder, or as to the merchantability or fitness for a particular purpose of such research, information, or resulting product, or that the goods, services, facilities or equipment provided will accomplish the intended results or are safe for any purpose including the intended purpose, or that any of the above will not interfere with privately-owned rights of others. Neither the government nor its contractors shall be liable for special, consequential or incidental damages attributed to such equipment, facilities, technical information, or services provided under this CRADA or such research, information, or resulting products made or developed under or as a result of this CRADA.

ARTICLE 14. DISCLAIMER OF ENDORSEMENT

NASA does not endorse or sponsor any commercial product, service, or activity. NASA’s participation in this CRADA or provision of goods, services, facilities or equipment under this CRADA does not constitute endorsement by NASA. Collaborating Party agrees that nothing in this CRADA will be construed to imply that NASA authorizes, supports, endorses, or sponsors any product or service of Collaborating Party resulting from activities conducted under this CRADA, regardless of the fact that such product or service may employ NASA-developed

technology.

ARTICLE 15. COMPLIANCE WITH LAWS AND REGULATIONS

(a) The Parties shall comply with all applicable laws and regulations including, but not limited to, safety; security; export control; environmental; and suspension and debarment laws and regulations. Access by a Collaborating Party to NASA facilities or property, or to a NASA Information Technology (IT) system or application, is contingent upon compliance with NASA security and safety policies and guidelines including, but not limited to, standards on badging, credentials, and facility and IT system/application access.

(b) With respect to any export control requirements:

(i) The Parties will comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 C.F.R. Parts 120 through 130, and the Export Administration Regulations (EAR), 15 C.F.R. Parts 730 through 799, in performing work under this CRADA. In the absence of available license exemptions or exceptions, the Collaborating Party shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data and software, or for the provision of technical assistance.

(ii) The Collaborating Party shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of work under this CRADA including instances where the work is to be performed on-site at NASA and where the foreign person will have access to export-controlled technical data or software.

(iii) The Collaborating Party will be responsible for all regulatory record-keeping requirements associated with the use of licenses and license exemptions or exceptions.

(iv) The Collaborating Party will be responsible for ensuring that the provisions of this Article apply to its Related Entities.

(c) With respect to suspension and debarment requirements:

(i) The Collaborating Party hereby certifies, to the best of its knowledge and belief, that it has complied, and shall comply, with 2 C.F.R. Part 180, Subpart C, as supplemented by 2 C.F.R. Part 1880, Subpart C.

(ii) The Collaborating Party shall include language and requirements equivalent to those set forth in subparagraph (c)(i), above, in any lower-tier covered transaction entered into under this CRADA.

ARTICLE 16. TERM

This CRADA becomes effective upon the date of the last signature below (“effective date”) and shall remain in effect until the completion of all obligations of both Parties hereto, or three years from the effective date, whichever comes first.

ARTICLE 17. RIGHT TO TERMINATE

Either Party may unilaterally terminate this CRADA by providing thirty (30) calendar days written notice to the other Party. In the event of such termination, Collaborating Party will be obligated to reimburse NASA for all costs for which the Collaborating Party was responsible and that have been incurred in support of this CRADA up to the date the termination notice is received by NASA. Where Collaborating Party terminates this CRADA, Collaborating Party will also be responsible for termination costs.

ARTICLE 18. CONTINUING OBLIGATIONS

The rights and obligations of the Parties that, by their nature, would continue beyond the expiration or termination of this CRADA, e.g., “Financial Obligations,” “Liability and Risk of Loss,” and “Intellectual Property Rights” shall survive such expiration or termination of this CRADA.

ARTICLE 19. MANAGEMENT POINTS OF CONTACT

The following personnel are designated as the principal points of contact between the Parties in the performance of this Agreement.

Technical Points of Contact:

NASA Goddard Space Flight Center

Name: TBD

Position: TBD

Mail Stop: TBD

8800 Greenbelt Road

Greenbelt, Maryland 20771

Phone: TBD

Email: TBD

PARTNER

Name

Position

Address 1

Address 2

Phone

Email

Business/Administrative Points of Contact

NASA Goddard Space Flight Center

Name: Enidia Santiago-Arce

Position: Technology Transfer Manager

Mail Stop: 504

8800 Greenbelt Road

Greenbelt, Maryland 20771

Phone: 301-286-5810

Email: gsfc-partnerships@mail.nasa.gov

PARTNER

Name

Position:

Address1

Address 2

Phone

Email

ARTICLE 20. DISPUTE RESOLUTION

Except as otherwise provided in the Article entitled “Priority of Use,” the Article entitled “Intellectual Property Rights – Invention and Patent Rights” (for those activities governed by 37 C.F.R. Part 404), and those situations where a pre-existing statutory or regulatory system exists (e.g., under the Freedom of Information Act, 5 U.S.C. § 552), all disputes concerning questions of fact or law arising under this CRADA shall be referred by the claimant in writing to the appropriate person identified in this CRADA as the “Points of Contact.” The persons identified as the “Points of Contact” for NASA and the Collaborating Party will consult and attempt to resolve all issues arising from the implementation of this CRADA. If they are unable to come to

CRADA on any issue, the dispute will be referred to the signatories to this CRADA, or their designees, for joint resolution. If the Parties remain unable to resolve the dispute, then the NASA official at that level will issue a written decision that will be a final agency decision for the purpose of judicial review. Nothing in this Article limits or prevents either Party from pursuing any other right or remedy available by law upon the issuance of the final agency decision.

ARTICLE 21. MODIFICATIONS

Any modification to this CRADA shall be executed, in writing, and signed by an authorized representative of NASA and the Collaborating Party.

ARTICLE 22. ASSIGNMENT

Neither this CRADA nor any interest arising under it will be assigned by the Collaborating Party or NASA without the express written consent of the officials executing, or successors, or higher-level officials possessing original or delegated authority to execute this CRADA.

ARTICLE 23. APPLICABLE LAW

U.S. Federal law governs this CRADA for all purposes, including, but not limited to, determining the validity of the CRADA, the meaning of its provisions, and the rights, obligations and remedies of the Parties.

ARTICLE 24. INDEPENDENT RELATIONSHIP

This CRADA is not intended to constitute, create, give effect to or otherwise recognize a joint venture, Partnership, or formal business organization, or agency CRADA of any kind, and the rights and obligations of the Parties shall be only those expressly set forth herein.

ARTICLE 25. SIGNATURE AUTHORITY

The signatories to this Agreement covenant and warrant that they have authority to execute this Agreement. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND SPACE PARTNER
ADMINISTRATION
GODDARD SPACE FLIGHT CENTER

BY: _____
NAME
Position:

BY: _____
NAME
Position:

DATE: _____

DATE: _____

DRAFT