

**NONREIMBURSABLE INTERAGENCY AGREEMENT
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
AND
THE DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
FOR THE
LUNAR ASSAY VIA SMALL SATELLITE ORBITER PROGRAM**

ARTICLE 1. AUTHORITY AND PARTIES

The National Aeronautics and Space Administration, located at 300 E St SW, Washington, DC 20546 (hereinafter referred to as “NASA”) enters into this Interagency Agreement (hereinafter referred to as “IAA”) in accordance with 51 U.S.C. § 20113(e). The Defense Advanced Research Projects Agency, located at 675 N. Randolph St, Arlington, VA 22203 (hereinafter referred to as “DARPA”), enters into this IAA in accordance with Department of Defense (DOD) Directive 5134.10, “Defense Advanced Research Projects Agency.” NASA and DARPA may be individually referred to as a “Party” and collectively referred to as the “Parties.”

ARTICLE 2. PURPOSE

The Lunar Assay via Small Satellite Orbiter (LASSO) program is managed by DARPA in collaboration with NASA.

The LASSO program aims to map probable reserves of water across the entire lunar surface through remote sensing measurements taken in a very low-altitude lunar orbit. Data gathered through LASSO will advance U.S. commercial capabilities for a number of application areas of interest to both DARPA and NASA, including cislunar space situational awareness, in-situ resource utilization, and small spacecraft technology development.

The LASSO program is structured to allow both agencies to offer their unique expertise in targeted ways from design, development, launch, and flight test of the LASSO spacecraft. DARPA will solely lead management of the industry performer(s) through mission design and spacecraft development, and NASA will provide DARPA with subject matter expertise during selection, design, and spacecraft development. Pending the results of the spacecraft build phase, NASA will optionally fund launch and mission operations of at least one commercial spacecraft built under the LASSO program.

NASA plans to apply what it learns from this partnership with DARPA to accrue knowledge of lunar resources for future missions, inform future technology investments, and advance the agency’s technology development and space exploration goals. NASA’s participation in LASSO will mature the capabilities necessary for smaller, more cost-effective instruments and spacecraft to take surface measurements from very low altitude above the Moon and other airless bodies. LASSO will reduce risk for future NASA and commercial missions to the Moon and other locations in deep space by demonstrating the performance of a spacecraft in this low lunar orbit

and demonstrating Earth-independent position, navigation, and timing. Additionally, the successful completion of LASSO will result in a map of probable reserves of water across the entire lunar surface. This data is expected to inform future in-situ resource utilization testing and infrastructure necessary for long-term human presence at the Moon and Mars.

Both NASA and DARPA have agreed that the development of a lunar orbiter capable of informing a comprehensive lunar water reserve model from very low lunar orbit is significantly challenging and presents a high level of technical risk. Building on a history of successful partnerships between the two agencies, NASA benefits from DARPA's high-risk, high-reward approach to technology development during the design and build phases of LASSO. DARPA benefits from NASA's deep subject matter expertise in the planning and operation of orbital technology demonstrations. This collaboration will yield valuable lessons learned by both agencies, which will inform the design and development of future technology investments and missions.

NASA understands that DARPA may terminate the LASSO contracts with industry performers at any time during phases 1A, 1B, or 2.

DARPA understands that NASA may elect not to launch a LASSO spacecraft at the end of Phase 2.

NASA's involvement in phases 1A, 1B, and 2 provides the agency mission and spacecraft design deliverables as completed by industry performers. Involvement of NASA subject matter experts in these phases of LASSO will also help them to become informed customers of similar commercial offerings in the future and bolster the agency's ability to advance the aforementioned technical capabilities.

All program phases are anticipated to operate at an unclassified level and may involve the use or creation of Controlled Unclassified Information (CUI).

ARTICLE 3. RESPONSIBILITIES

NASA will use reasonable efforts to:

1. Provide subject matter expertise to the acquisition led and solely managed by DARPA for solicitation reviews, proposal subject matter expert (SME) reviews, SME Technical inputs into mission design (Phase 1A and Phase 1B), and SME Technical inputs into the spacecraft build (Phase 2) of LASSO. Management of the industry performer(s) will be led by DARPA. NASA may provide SME Technical support in areas that include but are not limited to:
 - a. Small spacecraft systems
 - b. Small spacecraft mission simulation
 - c. Small spacecraft propulsion
 - d. Lunar communications

- e. Lunar position, navigation, and timing
- f. Lunar astrodynamics
- g. Remote sensing
- h. Mission planning and operations

This support will entail attendance of weekly technical interchange meetings and participation in all milestone reviews with industry performers. These meetings will also allow NASA to help inform the mission design and spacecraft build.

- 2. NASA SMEs participating in proposal evaluations will follow DARPA procedures for COI adjudication and SME involvement.

DARPA will use reasonable efforts to:

- 1. Provide regular status updates to NASA program leadership, including schedule and both technical and programmatic risks.
- 2. Provide copies to NASA of all deliverables received from commercial performers (e.g., review packages, testing and qualification documentation, briefing packages from technical interchange meetings).
- 3. Include NASA in technical interchange meetings with industry performers.
- 4. Develop a data custody framework for the probable lunar water reserves that can inform NASA's future in-situ resource utilization (ISRU) testing and infrastructure.

ARTICLE 4. SCHEDULE AND MAJOR PROGRAM PHASES

Months from Kick-off	Phase	Description of Work by Industry Performers	Milestone / Deliverable to NASA and DARPA
6 Months	Phase 1A	Proven reserve model, mission feasibility and design	Concept Design Review
24 Months	Phase 1B	Simulation, subsystem design and test plan, spacecraft design	Preliminary Design Review Critical Design Review
36 Months	Phase 2	Payload testing, trajectory analysis, spacecraft build	Spacecraft Testing and Qualification Documentation

ARTICLE 5. FINANCIAL OBLIGATIONS

There will be no transfer of funds between the Parties under this IAA and each Party will fund its own participation. All activities under or pursuant to this IAA are subject to the availability of

funds, and no provision of this IAA shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act (31 U.S.C. § 1341).

ARTICLE 6. LIABILITY

Each Party agrees to assume liability for its own risks arising from or related to activities conducted under this IAA.

ARTICLE 7. INTELLECTUAL PROPERTY RIGHTS - HANDLING OF DATA

A. In the performance of this IAA, NASA or DARPA (as “Disclosing Party”) may provide the other Party (as “Receiving Party”) with:

1. Data of third parties that the Disclosing Party has agreed to handle under protective arrangements or is required to protect under the Trade Secrets Act (18 U.S.C. § 1905) (“Third Party Proprietary Data”),
2. Government data, the use and dissemination of which, the Disclosing Party intends to control (“Controlled Government Data”), or
3. Software, including but not limited to source code, object code, algorithms, interfaces, and related documentation that the Disclosing Party has agreed to handle under protective arrangements, licensing restrictions, or is required to protect under the Trade Secrets Act (18 U.S.C. § 1905) (“Software”).

B. All Third-Party Proprietary Data, Software, and Controlled Government Data provided by Disclosing Party to Receiving Party shall be marked with a restrictive notice when delivered to Receiving Party and protected by Receiving Party in accordance with this Article.

C. Disclosing Party provides the following Data to Receiving Party. The technical documents below may not be comprehensive, are subject to change, and do not supersede any restrictive notice on the Data.

1. Third Party Proprietary Data: The Disclosing Party’s Third Party Proprietary Data, if any, will be identified in a separate technical document.
2. Controlled Government Data: The Disclosing Party’s Controlled Government Data, if any, will be identified in a separate technical document.
3. NASA software and related Data will be provided to DARPA under a separate Software Usage Agreement (SUA). DARPA shall use and protect the related data in accordance with this Article.

D. For such Data identified with a restrictive notice pursuant to paragraph B of this Article, including Data identified in an accompanying funding document, Receiving Party shall:

1. Use, disclose, or reproduce such Data only as necessary under this IAA;

2. Safeguard such Data from unauthorized use and disclosure;
3. Allow access to such Data only to its employees and any Related Entity (“Related Entity” means a contractor, subcontractor, or other entity having a legal relationship with NASA or Partner that is assigned, tasked, or contracted to perform activities under this IAA) requiring access under this IAA;
4. Except as otherwise indicated in D.3, preclude disclosure outside the Receiving Party’s organization;
5. Notify its employees with access about their obligations under this Article and ensure their compliance, and notify any Related Entity with access about their obligations under this Article; and
6. Dispose of such Data as Disclosing Party directs.

E. If the Parties exchange Data having a notice deemed ambiguous or unauthorized by the Receiving Party, it should tell the Disclosing Party. If the notice indicates a restriction, the Receiving Party must protect the Data under this Article unless otherwise directed in writing by the Disclosing Party.

F. Notwithstanding any restrictions provided in this Article, the Parties are not restricted in the use, disclosure, or reproduction of Data provided under this IAA that is:

1. Known or available from other sources without restriction;
2. Known, possessed, or developed independently by the party wishing to use the data, and without reference to the Proprietary Data;
3. Made available by the owners to others without restriction; or
4. Required by law or court order to be disclosed. If a Party believes that any exceptions apply, it shall notify the other Party before any unrestricted use, disclosure, or reproduction of the Data.

ARTICLE 8. INTELLECTUAL PROPERTY RIGHTS - INVENTION AND PATENT RIGHTS

Unless otherwise agreed upon by NASA and DARPA, custody and administration of inventions made (conceived or first actually reduced to practice) under this IAA will remain with the respective inventing Party. In the event an invention is made jointly by employees of the Parties (including by employees of a Party's contractors or subcontractors for which the U.S. Government has ownership), the Parties will consult and agree as to future actions toward establishment of patent protection for the invention.

ARTICLE 9. RELEASE OF GENERAL INFORMATION TO THE PUBLIC AND MEDIA

NASA or DARPA may, consistent with Federal law and this IAA, release general information regarding its own participation in this IAA. Insofar as participation of the other Party in this IAA is included in a public release, NASA and DARPA will consult with each other prior to any such

release, consistent with the Parties' respective policies. Pursuant to Section 841(d) of the NASA Transition Authorization Act of 2017, Public Law 115-10 (the "NTAA"), NASA is obligated to publicly disclose copies of all agreements conducted pursuant to NASA's 51 U.S.C. § 20113(e) authority in a searchable format on the NASA website within 60 days after the agreement is signed by the Parties. The Parties acknowledge that, if this IAA is entered into pursuant to NASA's 51 U.S.C. § 20113(e) authority, this IAA will be disclosed, without redaction, in accordance with the NTAA.

DARPA will remain the office of primary responsibility for external relations (public and congressional affairs) for matters pertaining to the LASSO program in Phases 1a, 1b, or 2, and NASA will assume the primary responsibility after Phase 2. All external requests for information will be submitted to DARPA's Communications Office, which has sole responsibility for public release authorization determinations regarding LASSO while the program is managed by DARPA. All data, information, and documentation related to LASSO intended for external release must be submitted to the DARPA Public Release Center for "Distribution Statement A" approval.

In instances where both DARPA and NASA have equity pertaining to public information, the DARPA Communications Office and NASA shall collaborate and jointly address external relations requirements.

ARTICLE 10. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS – FREE EXCHANGE OF DATA

NASA and DARPA agree that the information and data exchanged in furtherance of the activities under this IAA will be exchanged without use and disclosure restrictions unless required by national security regulations (e.g., classified information) or as otherwise provided in this IAA or agreed to by NASA and DARPA for specifically identified information or data (e.g., information or data specifically marked with a restrictive notice).

ARTICLE 11. PRIORITY OF USE

Any schedule or milestone in this IAA is estimated based upon the Parties' current understanding of the projected availability of its respective goods, services, facilities, or equipment. In the event that either Party's projected availability changes, NASA or DARPA, respectively, shall be given reasonable notice of that change, so that the schedule and milestones may be adjusted accordingly. The Parties agree that NASA's and DARPA's use of its own goods, services, facilities, or equipment shall have priority over the use planned in this IAA.

ARTICLE 12. 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 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, including use of Interconnection Security Agreements (ISAs), when applicable.

B. With respect to the requirements in Section 3 (a) (1) of the “One Small Step to Protect Human Heritage in Space Act” (Pub. L. 116-275):

1. In carrying out lunar activities under this IAA, Parties shall comply with “NASA’s Recommendations to Space-Faring Entities: How to Protect and Preserve the Historic and Scientific Value of U.S. Government Lunar Artifacts” issued on July 20, 2011 and updated on October 28, 2011, and any successor recommendations, guidelines, best practices or standards relating to the principle of due regard and the limitation of harmful interference with Apollo landing site artifacts issued by NASA.

2. Parties will ensure that the provisions of paragraph B.1 apply to any contractor, subcontractor, or other entity having a legal relationship with the Parties that is assigned, tasked, or contracted to perform activities under this IAA.

ARTICLE 13. TERM OF AGREEMENT

This IAA 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 five years from the effective date, whichever comes first.

ARTICLE 14. RIGHT TO TERMINATE

Either Party may unilaterally terminate this IAA by providing thirty (30) calendar days written notice to the other Party.

ARTICLE 15. CONTINUING OBLIGATIONS

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

ARTICLE 16. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this IAA.	
National Aeronautics and Space Administration	Defense Advanced Research Projects Agency
Christopher Baker Program Executive, Small Spacecraft Technology 300 E Street SW Washington, DC 20546 Phone: 661.418.1739 Email: christopher.e.baker@nasa.gov	Steven Chambers Program Manager, Strategic Technology Office 675 N. Randolph Street Arlington, VA 22203 Phone: 703.526.2738 Email: steven.chambers@darpa.mil

ARTICLE 17. DISPUTE RESOLUTION

All disputes concerning questions of fact or law arising under this IAA shall be referred by the claimant in writing to the appropriate person identified in this IAA as the “Points of Contact.” The persons identified as the “Points of Contact” for NASA and DARPA will consult and attempt to resolve all issues arising from the implementation of this IAA. If they are unable to come to agreement on any issue, the dispute will be referred to the signatories to this IAA, or their designees or successors, for joint resolution after the Parties have separately documented in writing clear reasons for the dispute. As applicable, disputes will be resolved pursuant to the Department of the Treasury’s Intragovernmental Transaction Guide (Treasury Financial Manual, Vol. 1, Chapter 2, Part 4700, Appendix 10 (hereinafter, the “Intragovernmental Transaction Guide”)).

ARTICLE 18. MODIFICATIONS

Any modification to this IAA shall be executed in writing and signed by an authorized representative of NASA and DARPA.

ARTICLE 19. APPLICABLE LAW

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

ARTICLE 20. LOAN OF GOVERNMENT PROPERTY

In the event NASA Equipment is to be loaned in connection with activities under this IAA, the parties shall enter into a NASA Form 893, Loan of NASA Equipment, for NASA equipment loaned to DARPA.

ARTICLE 21. SIGNATORY AUTHORITY

NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION

DEFENSE ADVANCED RESEARCH
PROJECTS AGENCY

Clayton P. Turner
Associate Administrator
Space Technology Mission Directorate

John S. Paschkewitz, Ph.D.
Office Director
Strategic Technology Office

DATE: _____

DATE: _____