

**NONREIMBURSABLE INTERAGENCY AGREEMENT  
BETWEEN  
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
AND  
DEFENSE ADVANCED RESEARCH PROJECTS AGENCY  
FOR  
DEMONSTRATION ROCKET FOR AGILE CISLUNAR OPERATIONS 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” or “Partner”), enters into this IAA in accordance with Department of Defense 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**

NASA Space Technology Mission Directorate (STMD) and DARPA will collaborate for the purpose of accomplishing mutually beneficial advancement and successful flight demonstration of nuclear thermal propulsion through DARPA’s Demonstration Rocket for Agile Cislunar Operations (DRACO) program. The Parties share a mutual interest in the ground and flight demonstration of a nuclear thermal propulsion capability and in advancing nuclear thermal rocket (NTR) technology research and development efforts in a time frame to support their respective missions. This IAA sets forth the Parties’ commitment to ensure that the DRACO demonstration objectives are achieved for the benefit of both Parties. This collaboration on DRACO is distinct from and independent of any NASA-commercial partner collaborations that are advancing technologies relevant to nuclear thermal propulsion and, specifically, currently proposed NASA-commercial partner engagements that align and may be associated with the DARPA DRACO Phase II/III Broad Agency Announcement (BAA) and any contracts or agreements resulting from that BAA.

This IAA outlines the formal roles, responsibilities, and processes that will enable interagency cooperation and coordination concerning the DRACO program’s activities and both agencies’ shared objectives with respect to that program. Any and all reimbursable activities related to DRACO will be negotiated and entered into under separate agreements as permitted by and in accordance with law and the respective Parties’ policies and processes.

NASA shall lead management of the overall NTR engine development and fabrication and shall retain final authority over all aspects of the successful execution of the NTR engine (except those explicitly listed as DARPA responsibilities below, where authorized and applicable), including, but not limited to: reactor development and fabrication; non-nuclear engine (NNE) development and fabrication; and accommodating requirements associated with integrating the NTR engine with the experimental NTR vehicle (X-NTRV). The Parties agree that all NASA-managed

activities, and all systems developed and data created thereunder, shall be unclassified at any level. DARPA shall retain authority over and shall be solely responsible for: X-NTRV to launch vehicle integration; launch vehicle procurement; launch approvals; program scheduling; contracting activities to the DRACO contractors/performers, ground segment activities, X-NTRV operations and disposition; technical development and contractual procurement of hardware and associated software; program security; and any and all other items necessary to execute the DRACO demonstration activity pursuant to the DRACO program.

### ARTICLE 3. RESPONSIBILITIES

NASA will use reasonable efforts to:

- a) Participate in and contribute to any and all regularly scheduled program meetings, weekly technical interchange meetings (TIMs) and other meetings with DARPA as necessary;
- b) Attend and participate in all necessary DRACO review panels;
- c) Provide DARPA with milestone reports on a quarterly basis, which shall include descriptions of overall progress, milestone status, and details regarding progress against milestone objectives;
- d) Promptly notify DARPA of any significant issues that pose a high risk to successfully meeting the technical or programmatic objectives of the DRACO effort and work with DARPA to evaluate any impacts to programmatic progress;
- e) Assume technical responsibility for and procure (either directly or via one or more assisted acquisitions, where authorized and applicable) the design, development, and fabrication of any and all unclassified NTR engine system and/or subsystem components, i.e., the reactor and all associated NNE hardware, that will achieve DRACO demonstration objectives and NASA's requirements;
- f) Provide DARPA with any and all unique terms, conditions, and applicable agency-specific statutes, regulations, directives, and other requirements for incorporation into any order or contract resulting from any assisted acquisitions undertaken by DARPA for NASA related to this effort;
- g) Collaborate with DARPA to develop and refine the interface requirements between the NTR engine and the X-NTRV;
- h) Collaborate with DARPA to develop a plan for terrestrial testing of the NTR engine reactor and NNE and work with DARPA to execute such testing;
- i) Coordinate with DARPA in order to facilitate DARPA receipt of high assay low enriched uranium (HALEU), pursuant to DARPA's agreement with the National Nuclear Security Administration (NNSA), for NTR engine fuel and reactor development;
- j) Implement inadvertent criticality safety systems;
- k) Deliver the NTR engine designed and developed under this effort to DARPA for X-NTRV integration and utilization for the DRACO demonstration;
- l) Support development of mission operations that are relevant to NTR engine operation and performance;
- m) Support NTR engine-mockup/engineering development unit (EDU) to X-NTRV tests, such as launch loads and fluids tests, if an EDU is required by the Parties;
- n) Support NTR engine to X-NTRV integration and functional checkout testing;
- o) Support X-NTRV to launch vehicle integration as pertains to the NTR engine;
- p) Support operation of X-NTRV on orbit as pertains to NTR engine; and

- q) Support the design, development, and testing of the X-NTRV or components as requested by DARPA and agreed to by NASA.

DARPA will use reasonable efforts to:

- a. Participate in any and all regularly scheduled program meetings, weekly technical interchange meetings (TIMs) and other meetings with NASA as necessary;
- b. Attend and participate in all necessary DRACO review panels;
- c. Provide NASA with milestone reports on a quarterly basis, which shall include descriptions of overall progress, milestone status, and details regarding progress against milestone objectives;
- d. Promptly notify NASA of any significant issues that pose a high risk to successfully meeting the technical or programmatic objectives of the DRACO effort and work with NASA to evaluate impacts to programmatic progress;
- e. Support and provide assistance for the design, development, and test of the NTR engine system or components/subsystems thereof as requested by NASA;
- f. Manage overall integrated X-NTRV development, including X-NTRV design, fabrication, contractor selection, assembly, test, and schedule;
- g. Manage acquisition activities and perform the role of contracting activity for the acquisition of both the NTR engine system (or NTR engine components/subsystems (where authorized and applicable)) for NASA and the X-NTRV;
- h. Incorporate any and all NASA-unique terms, conditions, and applicable agency-specific statutes, regulations, directives, and other applicable requirements into any order or contract resulting from any assisted acquisitions undertaken for NASA related to this effort, in compliance with the Federal Acquisition Regulation (FAR), Department of Defense FAR Supplement and NASA FAR Supplement, as appropriate;
- i. Provide program security oversight;
- j. Develop, in collaboration with NASA, any and all interface requirements between the NTR engine and the X-NTRV;
- k. Secure the required supply of HALEU fuel in accordance with the Agreement between DARPA and the United States Department of Energy (signed 24 March 2021);
- l. Ensure that all activities performed by DARPA and NASA under this effort remain in accordance with DARPA's Atomic Energy Act 91b authorization letter (signed 1 April 2022), including, but not limited to, addressing and ensuring responsibility for any and all safety and handling concerns, and interfacing with the Department of Energy regarding the same;
- m. Integrate the overall NTR engine to X-NTRV;
- n. Perform integrated X-NTRV checkout and functional testing;
- o. Secure launch vehicle procurement and integration for DRACO demonstration activity;
- p. Address any and all regulatory requirements for integrated X-NTRV transport to, processing at, and launch from the Eastern Range;
- q. Operate X-NTRV on orbit; and
- r. Dispose of X-NTRV on orbit.

#### ARTICLE 4. SCHEDULE AND MILESTONES

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

Phase II:

Integrated Vehicle (X-NTRV) Systems Requirements Review	FY23
Integrated Vehicle (X-NTRV) Preliminary Design Review	FY24
Integrated Project Team Meeting	FY24
Nuclear Engine (NTRE) Critical Design Review	FY25
Integrated Vehicle (X-NTRV) Critical Design Review	FY25
Integrated Project Team Meeting	FY25

Phase III:

Nuclear Engine (NTRE) Acceptance Review	FY26
Launch Readiness Review	FY27
Integrated Project Team Meeting	FY27
Launch and On-Orbit Testing	FY27

Parties agree to use reasonable efforts to achieve these milestones and milestone dates within the constraints of available funding, sound programmatic administration, and acceptable systems engineering practices. Adjustments to these milestones or milestone dates during execution of the agreement will be negotiated in accordance with the respective Parties' policies and processes.

#### ARTICLE 5. FINANCIAL OBLIGATIONS

There will be no transfer of funds between the Parties under this Agreement and each Party will fund its own participation. All activities under or pursuant to this Agreement are subject to the availability of funds, and no provision of this Agreement shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act (31 U.S.C. § 1341).

#### ARTICLE 6. 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 7. LIABILITY

The Code of Federal Regulations (14 C.F.R. § 1266.104) establishes a cross-waiver of

liability between the parties to agreements for science or space exploration activities unrelated to the International Space Station which involve a launch, and requires that such cross-waiver be flowed down to the parties' related entities. In furtherance of this requirement, the Parties agree to ensure that their respective applicable Related Entities are subject to the cross-waiver as set forth in 14 C.F.R. § 1266.104.

ARTICLE 8. INTELLECTUAL PROPERTY  
RIGHTS - DATA RIGHTS

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 other Federal Agency for specifically identified information or data (e.g., information or data specifically marked with a restrictive notice).

ARTICLE 9. INTELLECTUAL PROPERTY  
RIGHTS - HANDLING OF DATA

A. In the performance of this Agreement, 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"), or
2. Government data, including software, the use and dissemination of which, the Disclosing Party intends to control ("Controlled Government Data").

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

C. Disclosing Party provides the following Data to Receiving Party. The lists 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 Partner 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 Agreement;
2. Safeguard such Data from unauthorized use and disclosure;
3. Allow access to such Data only to its employees and any Related Entity requiring access under this Agreement;
4. Except as otherwise indicated in D.3, preclude disclosure outside 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 providing Party. If the notice indicates a restriction, the receiving Party must protect the Data under this Article unless otherwise directed in writing by the providing 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 Agreement that is:

1. known or available from other sources without restriction;
2. known, possessed, or developed independently, 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 10. 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 11. RELEASE OF GENERAL INFORMATION TO THE PUBLIC AND MEDIA

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

#### ARTICLE 12. 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 13. RIGHT TO TERMINATE

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

#### ARTICLE 14. CONTINUING OBLIGATIONS

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

#### ARTICLE 15. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Agreement.

## Management Points of Contact

### NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Dr. Anthony Calomino  
Program Manager  
300 E Street SW  
Washington, DC 20546  
Phone: 216-513-0489  
anthony.m.calomino@nasa.gov

### DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

Dr. Tabitha Dodson, PhD  
Program Manager  
675 North Randolph Street  
Arlington, VA 22203  
Phone: 571-384-9739  
Tabitha.dodson@darpa.mil

## ARTICLE 16. 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 17. INVESTIGATIONS OF MISHAPS AND CLOSE CALLS

In the case of a close call, mishap or mission failure, the Parties agree to provide assistance to each other in the conduct of any investigation. For all NASA mishaps or close calls, Partner agrees to comply with NPR 8621.1, "NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping" and any and all NASA Center-specific safety policies, as applicable.

## ARTICLE 18. MODIFICATIONS

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

The parties shall enter into a NASA Form 893, Loan of NASA Equipment, for NASA equipment loaned to Partner.

ARTICLE 21. SIGNATORY AUTHORITY

Approved and authorized on behalf of each Party by:

NATIONAL AERONAUTICS  
AND SPACE ADMINISTRATION  
BY:

DEFENSE ADVANCED RESEARCH  
PROJECTS AGENCY  
BY:

James L. Reuter  
Associate Administrator  
Space Technology Mission Directorate

Michael B. Leahy, Jr.  
Director  
Tactical Technology Office