Attachment 12: Draft Space Act Agreement (SAA)

UNFUNDED SPACE ACT AGREEMENT
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
AND
VENTURI ASTROLAB, INC.
ENTITLED “ASTROLAB”
UNDER THE SPACE TECHNOLOGY
ANNOUNCEMENT OF COLLABORATION OPPORTUNITY 2022

ARTICLE 1. AUTHORITY AND PARTIES

In accordance with the National Aeronautics and Space Act (51 U.S.C. § 20113(e)), this Agreement is entered into by the National Aeronautics and Space Administration, located at 300 E Street SW, Washington, DC 20546 (hereinafter referred to as "NASA") and Venturi Astrolab, Inc. located at 12536 Chadron Avenue, Hawthorne, CA, 90250 (hereinafter referred to as "Partner" or "Astrolab"). NASA and Partner may be individually referred to as a "Party" and collectively referred to as the "Parties."

ARTICLE 2. PURPOSE

This Agreement (“Agreement”) shall be for the purpose of accelerating the development and testing of critical technologies for emerging space system capabilities consistent with the capabilities articulated in the STMD 2022 Announcement of Collaboration Opportunity (ACO). ”The Parties’ specific responsibilities, schedule, and milestones are described in one or more Responsibilities and Schedule Document, completed in coordination with a NASA Center, and incorporated fully by reference into this Agreement. This collaboration is intended to advance commercial space-related efforts by facilitating access by Partner to NASA’s extensive resources including facilities, technical expertise, hardware, and software. Each Center Responsibilities and Schedule Document will detail the specific purpose of the proposed activity, responsibilities, schedule and milestones, and any personnel, property or facilities proposed to be made available to Partner.

ARTICLE 3. RESPONSIBILITIES

The Parties agree they will use reasonable efforts to fulfill the Responsibilities set forth in the Responsibilities and Schedule Document.

ARTICLE 4. SCHEDULE AND MILESTONES

The Parties agree they will use reasonable efforts to fulfill the Responsibilities set forth in the Responsibilities and Schedule Document.

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 Agreement 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, Partner 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 Agreement. 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 non-NASA Partners, NASA, in its sole discretion, shall determine the priority as between those Partners. This Agreement does not obligate NASA to seek alternative government property or services under the jurisdiction of NASA at other locations.

ARTICLE 7. NONEXCLUSIVITY

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

ARTICLE 8. LIABILITY

A. Partner hereby waives any claims against NASA or one or more of its Related Entities for any injury to, or death of, Partner or one or more of its Related Entities, or for damage to, or loss of, Partner's property or the property of its Related Entities, arising from or related to activities conducted under this Agreement, whether such injury, death, damage, or loss arises through negligence or otherwise, except in the case of willful misconduct. For purposes of

this Agreement, “Related Entities” shall mean contractors and subcontractors of a Party at any tier; grantees, investigators, customers, and users of a Party at any tier and their contractors or subcontractor at any tier; or, employees of the Party or any of the foregoing.

B. Partner further agrees to extend this unilateral waiver to its related entities by requiring them, by contract or otherwise, to waive all claims against NASA and its Related Entities for injury, death, damage, or loss arising from or related to activities conducted under this Agreement. In the event the U.S. Government incurs any liability based upon Partner’s failure to provide for the waiver by Partner’s Related Entities set out above, Partner agrees to indemnify and hold the U.S. Government harmless against such liability, including costs and expenses incurred by the U.S. Government in defending against any suit or claim for liability by Partner’s Related Entities.

C. In the event U.S. Government property is damaged as a result of activities conducted under this Agreement for the primary benefit of Partner, except in the case of gross negligence or willful misconduct by NASA, Partner shall be solely responsible for the repair and restoration of such property subject to NASA direction.

D. Notwithstanding the other provisions of this Article, the waiver of liability set forth in this section shall not be applicable to:
i. Claims between Partner and its own Related Entity or between its own Related Entities;
ii. Claims made by a natural person, his/her estate, survivors, or anyone claiming by or through him/her (except when such person or entity is a Party to this Agreement or is otherwise bound by the terms of this waiver) for bodily injury to, or other impairment of health of, or death of, such person;
iii. Claims for damage caused by willful misconduct;
iv. Intellectual property claims;
v. Claims for damage resulting from a failure of Partner to extend the waiver of liability to its Related Entities, pursuant to paragraph B of this Article; or
vi. Claims by Partner arising out of or relating to NASA’s failure to perform its obligations under this Agreement.

ARTICLE 9. LIABILITY - PRODUCT LIABILITY

With respect to products or processes resulting from a Party’s participation in an SAA, each Party that markets, distributes, or otherwise provides such product, or a product designed or produced by such a process, directly to the public will be solely responsible for the safety of the product or process.

ARTICLE 10. LIABILITY - PRODUCT LIABILITY INDEMNIFICATION

In the event the U.S. Government incurs any liability based upon Partner's, or Partner's Related Entity's, use or commercialization of products or processes resulting from a Party's participation under this Agreement, Partner agrees to indemnify and hold the U.S. Government harmless against such liability, including costs and expenses incurred by the U.S. Government in defending against any suit or claim for such liability.

ARTICLE 11. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

A. General

1. "Related Entity" as used in this Data Rights Article means a contractor, subcontractor, grantee, or other entity having a legal relationship with NASA or Partner that is assigned, tasked, or contracted to perform activities under this Agreement.
2. "Data" means recorded information, regardless of form, the media on which it is recorded, or the method of recording.
3. "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 is:
   a. known or available from other sources without restriction;
   b. known, possessed, or developed independently, and without reference to the Proprietary Data;
   c. made available by the owners to others without restriction; or
   d. required by law or court order to be disclosed.
4. Data exchanged under this Agreement is exchanged without restriction except as otherwise provided herein.
5. 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 in 3., above. If a Party believes that any exceptions apply, it shall notify the other Party before any unrestricted use, disclosure, or reproduction of the Data.
6. The Parties will not exchange preexisting Proprietary Data under this Agreement unless authorized herein or in writing by the owner.
7. 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.
8. The Data rights herein apply to the employees and Related Entities of Partner. Partner shall ensure that its employees and Related Entity

employees know about and are bound by the obligations under this Article.

9. Disclaimer of Liability: NASA is not restricted in, or liable for, the use, disclosure, or reproduction of Data without a restrictive notice or for Data Partner gives, or is required to give, the U.S. Government without restriction.
10. Partner may use the following or a similar restrictive notice:

    Proprietary Data Notice
    The data herein include Proprietary Data and are restricted under the Data Rights provisions of Space Act Agreement [provide applicable identifying information].

    Partner 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.**"

B. Data First Produced by Partner under this Agreement

If Data first produced by Partner 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.

C. Data First Produced by NASA under this Agreement

If Partner requests that Data first produced by NASA under this Agreement be protected, and NASA determines it would be Proprietary Data if obtained from Partner, NASA will mark it with a restrictive notice and use reasonable efforts to protect it for five (5) years after its development. 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. Partner must 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.

D. 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

Agreement. The Parties will coordinate publication of results allowing a reasonable time to review and comment.

E. 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 (one (1) year unless otherwise agreed or the Data is restricted for a longer period herein).

F. Copyright

Data exchanged with a copyright notice and with no restrictive notice is presumed to be published. The following royalty-free licenses apply:

1. If indicated on the Data that it was produced outside of this Agreement, it may be reproduced, distributed, and used to prepare derivative works only for carrying out the Receiving Party's responsibilities under this Agreement.

2. Data without the indication of F.1. is presumed to be first produced under this Agreement. Except as otherwise provided in paragraph E. of this Article, and in the Invention and Patent Rights Article of this Agreement for protection of reported inventions, the Data may be reproduced, distributed, and used to prepare derivative works for any purpose.

G. Data Subject to Export Control

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

H. Handling of Background, Third Party Proprietary, and Controlled Government Data

1. NASA or Partner (as Disclosing Party) may provide the other Party or its Related Entities (as Receiving Party):
   a. Proprietary Data developed at Disclosing Party's expense outside of this Agreement (referred to as Background Data);

b. Proprietary Data of third parties that Disclosing Party has agreed to protect or is required to protect under the Trade Secrets Act (18 U.S.C. § 1905) (referred to as Third Party Proprietary Data); and
c. U.S. Government Data, including software and related Data, Disclosing Party intends to control (referred to as Controlled Government Data).

2. All Background, Third Party Proprietary 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.
3. 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.
   a. Background Data:
   The Disclosing Party's Background Data, if any, will be identified in a separate technical document.
   b. Third Party Proprietary Data:
   The Disclosing Party's Third Party Proprietary Data, if any, will be identified in a separate technical document.
   c. Controlled Government Data:
   The Disclosing Party's Controlled Government Data, if any, will be identified in a separate technical document.
   d. Notwithstanding H.4., NASA software and related Data will be provided to Partner 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 Partner enters into a license under 37 C.F.R. Part 404, the related Data shall be disposed of as NASA directs:
   [insert name and NASA Case No. of the software; if none, insert "None."]
4. For such Data identified with a restrictive notice pursuant to H.2. including such Data identified pursuant to this Article, Receiving Party shall:
   a. Use, disclose, or reproduce such Data only as necessary under this Agreement;
   b. Safeguard such Data from unauthorized use and disclosure;
   c. Allow access to such Data only to its employees and any Related Entity requiring access under this Agreement;
   d. Except as otherwise indicated in 4.c., preclude disclosure outside Receiving Party's organization;
   e. 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
   f. Dispose of such Data as Disclosing Party directs.

I. Oral and visual information

If Partner discloses Proprietary Data orally or visually, NASA will have no duty to restrict, or liability for disclosure or use, unless Partner:

1. Orally informs NASA before initial disclosure that the Data is Proprietary Data, and
2. Reduces the Data to tangible form with a restrictive and gives it to NASA within ten (10) calendar days after disclosure.

J. Classified Material

If classified material is used under this Agreement, Partner must provide a completed Contract Security Classification Specification (DD Form 254 or equivalent) to the NASA Point of Contact. Handling of classified material must be consistent with NASA and U.S Federal Government statutes, regulations, and policies.

ARTICLE 12. INTELLECTUAL PROPERTY RIGHTS – INVENTION AND PATENT RIGHTS

A. General

1. 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.
2. “Related Entity” as used in this Invention and Patent Rights Article means a contractor, subcontractor, grantee, or other entity having a legal relationship with NASA or Partner assigned, tasked, or contracted with to perform activities under this Agreement.
3. The invention and patent rights herein apply to employees and Related Entities of Partner. Partner shall ensure that its employees and Related Entity employees know about and are bound by the obligations under this Article.

B. NASA Inventions

NASA will use reasonable efforts to report inventions made under this Agreement by its employees. Upon request, NASA will use reasonable efforts to grant Partner, under 37 C.F.R. Part 404, a negotiated license to any NASA invention made under this Agreement. This license is subject to paragraph E.1. of this Article.

C. NASA Related Entity Inventions

NASA will use reasonable efforts to report inventions made under this Agreement by its Related Entity employees, or jointly between NASA and Related Entity employees, where NASA has the right to acquire title. Upon request, NASA will use reasonable efforts to grant Partner, under 37 C.F.R. Part 404, a negotiated license to any of these inventions where NASA has acquired title. This license is subject to paragraph E.2. of this Article.

D. Joint Inventions With Partner

The Parties will use reasonable efforts to report, and cooperate in obtaining patent protection on, inventions made jointly between NASA employees, Partner employees, and employees of either Party's Related Entities. Upon timely request, NASA may, at its sole discretion and subject to paragraph E. of this Article:

1. refrain from exercising its undivided interest inconsistently with Partner's commercial business; or
2. use reasonable efforts to grant Partner, under 37 C.F.R. Part 404, an exclusive or partially exclusive negotiated license.

E. Rights to be Reserved in Partner's License

Any license granted Partner under paragraphs B., C., or D. of this Article is subject to the following:

1. For inventions made solely or jointly by NASA employees, NASA reserves the irrevocable, royalty-free right of the U.S. Government to practice the invention or have it 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.
2. For inventions made solely or jointly by employees of a NASA Related Entity, NASA reserves the rights in 1. above, and a revocable, nonexclusive, royalty-free license retained by the Related Entity under 14 C.F.R. § 1245.108 or 37 C.F.R. § 401.14 (e).

F. Protection of Reported Inventions

For inventions reported under this Article, the Receiving Party shall withhold all invention reports or disclosures from public access for a reasonable time (1 year unless otherwise agreed or unless restricted longer herein) to facilitate establishment of patent rights.

G. Patent Filing Responsibilities and Costs

1. The invention and patent rights herein apply to any patent application or patents covering an invention made under this Agreement. Each Party is responsible for its own costs of obtaining and maintaining patents covering sole inventions of its employees. The Parties may agree otherwise, upon the reporting of any invention (sole or joint) or in any license granted.
2. Partner shall include the following in patent applications for an invention made jointly between NASA employees, its Related Entity employees and Partner 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.

NASA technology available for licensing can be located by visiting the following website address – http://technology.nasa.gov.

ARTICLE 13. USE OF NASA NAME AND NASA EMBLEMS

A. NASA Name and Initials

Partner 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" Article, Partner must submit any proposed public use of the NASA name or initials (including press releases and all promotional and advertising use) to the NASA Associate Administrator for the Office of Communications or designee ("NASA Communications") for review and approval. Approval by NASA Office of Communications shall be based on applicable law and policy governing the use of the NASA name and initials.

B. NASA Emblems

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. Partner must submit any proposed use of the emblems to NASA Communications for review and approval.

ARTICLE 14. RELEASE OF GENERAL INFORMATION TO THE PUBLIC AND MEDIA

NASA or Partner may, consistent with Federal law and this Agreement, release general information regarding its own participation in this Agreement as desired.

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 a copy of this Agreement will be disclosed, without redactions, in accordance with the NTAA.

ARTICLE 15. DISCLAIMER OF WARRANTY

Goods, services, facilities, or equipment provided by NASA under this Agreement 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 Agreement, or as to any products made or developed under or as a result of this Agreement 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 Agreement or such research, information, or resulting products made or developed under or as a result of this Agreement.

ARTICLE 16. DISCLAIMER OF ENDORSEMENT

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

ARTICLE 17. 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 Participant 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 any export control requirements:

1. 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 Agreement or any Annex to this Agreement. In the absence of available license exemptions or exceptions, the Partner 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.

2. The Partner shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of work under this Agreement or any Annex under this Agreement, 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.

3. The Partner will be responsible for all regulatory record-keeping requirements associated with the use of licenses and license exemptions or exceptions.

4. The Partner will be responsible for ensuring that the provisions of this Article apply to its Related Entities.

C. With respect to suspension and debarment requirements:

1. The Partner 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.

2. The Partner shall include language and requirements equivalent to those set forth in subparagraph C.1., above, in any lower-tier covered transaction entered into under this Agreement.

D. Partner shall annually certify for itself and its team members the following to the NASA Administrative Contact to this Agreement:

1. Neither Partner nor any of its subcontractors nor partners are presently debarred, suspended, proposed for debarment, or otherwise declared ineligible for award of funding by any Federal agency;

2. Neither Partner nor any of its subcontractors nor partners have been convicted or had a civil judgment rendered against them within the last three (3) years for fraud in obtaining, attempting to obtain, or performing a Government contract;
3. Partner and any of its team members, subcontractors, or partners receiving $100,000 or more in NASA funding for work performed under this Agreement must have not used any appropriated funds for lobbying purposes prohibited by 31 U.S.C. § 1352; and
4. The Lead Partner must be a for-profit entity organized under the laws of the United States.
5. The Lead Partner and all team members must be:

A. More than 50 percent owned and controlled by United States nationals; or
B. A subsidiary of a foreign company and such subsidiary has in the past evidenced a substantial commitment to the United States market through –
    a. Investments in the United States in long-term research, development, and manufacturing (including the manufacture of major components and subassemblies); and
    b. Significant contributions to employment in the United States

To the extent an entity proposes use of Government funding for any part of a commercial launch, the entity providing those launch services must meet the eligibility requirements of 51 USC 50913. In accordance with the National Space Transportation Policy, use of a non-U.S. manufactured launch vehicle is permitted only on a no-exchange-of-funds basis.

NASA conducts research with foreign entities only on a cooperative, no-exchange-of funds basis. Although foreign individuals employed by a Partner in support of this FSAA may receive NASA funds, NASA funding may not support research efforts, including travel, by non-U.S. organizations, including sub-Partners, at any level. The direct purchase of supplies and/or services, which do not constitute research, from non-U.S. sources by the Partner is permitted.

E. Pursuant to The Department of Defense and Full-Year Appropriation Act, Public Law 112-10, Section 1340(a); The Consolidated and Further Continuing Appropriation Act of 2012, Public Law 112-55, Section 539; and future-year appropriations (hereinafter, "the Acts"), NASA is restricted from using funds appropriated in the Acts to enter into or fund any agreement of any kind to participate, collaborate, or coordinate bilaterally with China or any Chinese-owned company, at the prime recipient level or at any subrecipient level, whether the bilateral involvement is funded or performed under a no-exchange of funds

arrangement. Partner hereby certifies that it is not China or a Chinese-owned company, and that the Partner will not participate, collaborate, or coordinate bilaterally with China or any Chinese-owned company, at the prime recipient level or at any subrecipient level, whether the bilateral involvement is funded or performed under a no-exchange of funds arrangement.

(a) Definition: "China or Chinese-owned Company" means the People's Republic of China, any company owned by the People's Republic of China, or any company incorporated under the laws of the People's Republic of China.

(b) The restrictions in the Acts do not apply to commercial items of supply needed to perform this agreement. However, Partner shall disclose to NASA if it anticipates making any award, including those for the procurement of commercial items, to China or a Chinese-owned entity.

(c) Subawards – The Partner shall include the substance of this provision in all subawards made hereunder.

In addition to the above certification, Partner shall immediately disclose to the NASA Administrative Contact, for any individual involved in this NASA-funded activity, any current or pending professional and educational affiliations or commitments to China or a Chinese-owned company, including Chinese universities.

F. Regarding INKSNA requirements, Partner shall disclose to NASA if it intends to rely upon Russian entities for its demonstration. Partner shall not subcontract to Russian entities without first receiving written approval from NASA.

(a) Definitions: In this provision:

(1) The term “Russian entities” means:

(A) Russian persons, or

(B) Entities created under Russian law or owned, in whole or in part, by Russian persons or companies including, but not limited to, the following:

(i) The Russian Federal Space Agency (Roscosmos),

(ii) Any organization or entity under the jurisdiction or control of Roscosmos, or

(iii) Any other organization, entity or element of the Government of the Russian Federation.

(2) The term “extraordinary payments” means payments in cash or in kind made or to be made by the United States Government prior to December 31, 2025, for work to be performed or services to be rendered prior to that date necessary to meet United States obligations under the Agreement Concerning Cooperation on the Civil International Space Station, with annex, signed at Washington January 29, 1998, and entered into force March 27, 2001, or any protocol, agreement, memorandum of understanding, or contract related thereto.

(b) This clause implements the reporting requirement in section 6(i) of the Iran, North Korea, and Syria Nonproliferation Act. The provisions of this clause are without prejudice to the question of whether the Partner or its subcontractor(s) are making extraordinary payments under section 6(a) or fall within the exceptions in section 7(1)(B) of the Act. NASA has applied the restrictions in the Act to include funding of Russian entities via U.S. Contractors (Awardees).

(c) (1) The Partner shall not subcontract with Russian entities without first receiving written approval from the NASA Administrative Contact. In order to obtain this written approval to subcontract with any Russian entity as defined in paragraphs (a), the Partner shall provide the NASA Administrative Contact with the following information related to each planned new subcontract and any change to an existing subcontract with entities that fit the description in paragraph (a):

(A) A detailed description of the subcontracting entity, including its name, address, and a point of contact, as well as a detailed description of the proposed subcontract including the specific purpose of payments that will made under the subcontract.

(B) The Partner shall provide certification that the subcontracting entity is not, at the date of the subcontract approval request, on any of the lists of proscribed denied parties, especially designated nationals and entities of concern found at:

BIS's Listing of Entities of Concern

(see http://www.bis.doc.gov/index.php/policy-guidance/lists-of-parties-of-concern/entity-list)

BIS's List of Denied Parties

(see http://www.bis.doc.gov/index.php/policy-guidance/lists-of-parties-of-concern/denied-persons-list)

OFAC's List of Specially Designated Nationals

(see http://www.treasury.gov/resource-center/sanctions/SDN-List/Pages/default.aspx)

List of Unverified Persons in Foreign Countries
(see http://www.bis.doc.gov/index.php/policy-guidance/lists-of-parties-of-concern/unverified-list)

State Department's List of Parties Statutorily Debarred for Arms Export Control Act Convictions

(see https://www.pmddtc.state.gov/ddtc_public?id=ddtc_kb_article_page&sys_id=7188dac6db3cd30044f9ff621f961914)

State Department's Lists of Proliferating Entities
(see http://www.state.gov/t/isn/c15231.htm)

(2) Unless relief is granted by the NASA Administrative Contact, the information necessary to obtain approval to subcontract shall be provided to the NASA Administrative Contact 30 business days prior to executing any planned subcontract with entities defined in paragraph (a).

(d) After receiving approval to subcontract, the Partner shall provide the NASA Administrative Contact with a report every six months that documents the individual payments made to an entity in paragraph (a). The reports are due on July 15th and January 15th. The July 15th report shall document all of the individual payments made from the previous January through June. The January 15th report shall document all of the individual payments made from the previous July through December. The content of the report shall provide the following information for each time a payment is made to an entity in paragraph (a):

(1) The name of the entity
(2) The subcontract number
(3) The amount of the payment
(4) The date of the payment

(e) The NASA Administrative Contact may direct the Partner to provide additional information for any other prospective or existing subcontract at any tier. The NASA Administrative Contact may direct the Partner to terminate for the convenience of the Government any subcontract at any tier with an entity described in paragraph (a), subject to an equitable adjustment.

(f) On or after December 31, 2025, the Partner shall be responsible to make payments to entities defined in paragraph (a) of this provision. Any subcontract with entities defined in paragraph (a), therefore, shall be completed in sufficient time to permit the U.S. Government to make extraordinary payments on subcontracts with Russian entities on or before December 31, 2025.

(g) The Partner shall include the substance of this clause in all its subcontracts, and shall require such inclusion in all other subcontracts of any tier. The Partner shall be responsible to obtain written approval from the NASA Administrative Contact to enter into any tier subcontract that involves entities defined in paragraph (a).

G. With respect to the requirements in Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year 2019, Public Law 115-232:

1. In performing this Agreement, Partner will not use, integrate with a NASA system, or procure with NASA funds (if applicable), “covered telecommunications equipment or services” (as defined in Section 889(f)(3) of the NDAA).

2. The Partner will ensure that the provisions of this Article apply to its Related Entities.

ARTICLE 18. TERM OF AGREEMENT

This Agreement 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 X years from the Effective Date, whichever comes first.

ARTICLE 19. RIGHT TO TERMINATE

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

ARTICLE 20. 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 “Intellectual Property Rights” related clauses shall survive such expiration or termination of this Agreement.

ARTICLE 21. POINTS OF CONTACT

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

Technical Points of Contact

NASA	VENTURI ASTROLAB, INC.
[NAME]	JARET MATTHEWS
[ADDRESS]	12536 CHADRON AVENUE,
[PHONE]	HAWTHORNE, CA 90250
[FAX]	P: 310-989-1264
[EMAIL]	jaret.matthews@venturiastrolab.com

ARTICLE 22. 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 Agreement shall be referred by the claimant in writing to the appropriate person identified in this Agreement as the “Points of Contact.” The persons identified as the “Points of Contact” for NASA and the Partner will consult and attempt to resolve all issues arising from the implementation of this Agreement. If they are unable to come to agreement on any issue, the dispute will be referred to the signatories to this Agreement, or their designees, for joint resolution. If the Parties remain unable to resolve the dispute, then the NASA signatory or that person’s designee, as applicable, will issue a written decision that will be the 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 23. 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 Johnson Space Center policies as appropriate.

ARTICLE 24. MODIFICATIONS

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

ARTICLE 25. ASSIGNMENT

Neither this Agreement nor any interest arising under it will be assigned by the Partner 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 Agreement.

ARTICLE 26. APPLICABLE LAW

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

ARTICLE 27. INDEPENDENT RELATIONSHIP

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

ARTICLE 28. LOAN OF GOVERNMENT PROPERTY

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

ARTICLE 29. SIGNATORY 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 ADMINISTRATION	VENTURI ASTROLAB, INC.
BY: Walter Engelund Digitally signed by Walter Engelund Date: 2023.04.27 11:41:35 -04'00'	BY:
James L. Reuter Associate Administrator, STMD	Jaret Matthews CEO, President
DATE:	DATE: Nov 21, 2022

THE RESPONSIBILITIES AND SCHEDULE DOCUMENT IS REQUIRED TO BE INCLUDED AS AN ATTACHMENT TO THE CENTER LETTER OF INTENT SUPPORTING THE PROPOSAL. SUBMISSION OF A CENTER LETTER OF INTENT AND RESPONSIBILITY AND SCHEDULE DOCUMENT IN A FINAL ACO PROPOSAL INDICATES PROPOSER'S ACCEPTANCE OF THE RESPONSIBILITIES AND SCHEDULE DOCUMENT PROPOSED BY THE CENTER IF SELECTED FOR AWARD.
PURSUANT OF THE TEMPLATE SPACE ACT AGREEMENT, THE RESPONSIBILITIES AND SCHEDULE DOCUMENT IS INCORPORATED FULLY BY REFERENCE INTO THE SPACE ACT AGREEMENT AND THEREFORE WILL BE PUBLISHED WITH THE SPACE ACT AGREEMENT IN ACCORDANCE WITH ARTICLE 14 OF THE SPACE ACT AGREEMENT.

RESPONSIBILITIES AND SCHEDULE

DEVELOPED BY GLENN RESEARCH CENTER

TO SUPPORT ACO 2022 PROPOSAL SUBMITTED BY

VENTURI ASTROLAB INC.

1. RESPONSIBILITIES

A. **GRC** will use reasonable efforts to support two rounds of traction, operational, and endurance testing of each of two Lunar Tire prototypes as follows:

1. Provide the test rigs supporting traction, operational, and endurance testing utilizing their Traction and Excavation Capabilities (TREC), Extreme Terrain Endurance (XTERra), and Extreme Cyclic Environmental Load (XCEL) test rigs, to meet the test conditions described on the proposal.
2. Provide the data acquisition systems to carry out the proposed data collection.
3. Provide the soil simulant for traction testing.
4. Execute the proposed tests to the following scope:
    - Traction Testing to measure the net thrust capability of the tire in lunar highlands soil simulant
        - 1 type of soil per round of testing
        - Cone penetrometer tests to characterize the prepared soil

    - Net thrust testing at 3 normal loads and 17 slip values per load (**total 51 tests**)
- Operation Testing to evaluate the dynamic response of the tire driving over lunar terrain across lunar temperature conditions
    - 1 terrain setup per round of testing
    - Operational testing at 3 temperature levels and 15 km per temperature (total 45 km @10cm/s, **~125 rig operation hours**)
- Endurance Testing to determine the failure mode and cycle life potential of the tire when experiencing repetitive loading across lunar temperature conditions
    - 1 tire index position
    - Loading at 3 temperature levels and 75k cycles per temperature condition (total 225k cycles @1Hz, **~65 rig operation hours**)

5. Provide a report describing the test conditions and measurements taken, as well as raw data in the electronic form.

B. **Venturi Astrolab Inc.** will use reasonable efforts to:

1. Provide the tire test article.
2. Provide the regolith and terrain features (ex. rocks) for the operations testing.
3. Summarize the test results for the ACO reports.

2. SCHEDULE

The planned schedule for the activities with Venturi Astrolab Inc. as defined in Paragraph 1. RESPONSIBILITIES are as follows in Table 1:

Table 1: Planned tasks and milestones for the Venturi Astrolab ACO proposed project.

Task / Milestone	Deliverable	Responsible Party	Due Date
Project Kickoff	N/A	Venturi Astrolab	ATP
Prototype 1			
Production of Prototype 1	Tire Test Article	Venturi Astrolab	ATP+1 m

Operational Testing	Test Report	GRC	ATP+5 m
Endurance Testing	Test Report	GRC	ATP+7 m
Traction Testing	Test Report	GRC	ATP+ 8 m
Prototype 1 Progress Review	N/A	Venturi Astrolab	ATP+ 8 m
Prototype 2			
Production of Prototype 2	Tire Test Article	Venturi Astrolab	ATP+9 m
Operational Testing	Test Report	GRC	ATP+13 m
Endurance Testing	Test Report	GRC	ATP+15 m
Traction Testing	Test Report	GRC	ATP+16 m
Prototype 2 Progress Review	N/A	Venturi Astrolab	ATP+16 m
Project Closeout			
Final Report to NASA Stakeholders	Final Report of Tire Performance	Venturi Astrolab	ATP+18 m

3. COST

Center Contribution	Fiscal Year 1	Fiscal Year 2	Fiscal Year 3
Total Travel Dollars	$0	$0	$0
Total Labor Dollars	$14,812	$86,162	$21,000
Total Procurement Dollars	$38,330	$331,259	$60,002
Sub Totals	$53,142	$417,421	$81,001
Grand Total	$551,565		

4. POINTS OF CONTACT

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

GLENN RESEARCH CENTER

Derek Quade
21000 Brookpark Road

VENTURI ASTROLAB INC.

Vivake Asnani
12536 Chadron AVE.,

B162:321
P: 216.433.3830
derek.j.quade@nasa.gov

Hawthorne, CA 90250
P: 614-284-6680
vivake.asnani@venturiastrolab.com

5. MODIFICATIONS

Any modification to this Responsibilities and Schedule document set forth herein after award shall be documented in writing, and signed by both the Glenn Research Center and the Venturi Astrolab Inc. Modification of this Responsibilities and Schedule document does not modify the terms of the Space Act Agreement.

6. SIGNATORY AUTHORITY

The signatory to this Responsibilities and Schedule document represents and warrants that he/she has authority to commit the Glenn Research Center to support Venturi Astrolab Inc. if selected for award.

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION

Glenn Research Center

BY: MICHAEL BARRETT Digitally signed by MICHAEL BARRETT Date: 2022.11.18 09:23:29 -05'00'
Michael J. Barrett, Ph.D.

National Aeronautics and
Space Administration
Lyndon B. Johnson Space Center
21201 **NASA** Parkway
Houston, TX 77058-3696

Reply to Attn. of: AA2-22-013

November 14, 2022

THE RESPONSIBILITIES AND SCHEDULE DOCUMENT IS REQUIRED TO BE INCLUDED AS AN ATTACHMENT TO THE CENTER LETTER OF INTENT SUPPORTING THE PROPOSAL.

SUBMISSION OF A CENTER LETTER OF INTENT AND RESPONSIBILITY AND SCHEDULE DOCUMENT IN A FINAL ACO PROPOSAL INDICATES PROPOSER'S ACCEPTANCE OF THE RESPONSIBILITIES AND SCHEDULE DOCUMENT PROPOSED BY THE CENTER IF SELECTED FOR AWARD.

PURSUANT OF THE TEMPLATE SPACE ACT AGREEMENT, THE RESPONSIBILITIES AND SCHEDULE DOCUMENT IS INCORPORATED FULLY BY REFERENCE INTO THE SPACE ACT AGREEMENT AND THEREFORE WILL BE PUBLISHED WITH THE SPACE ACT AGREEMENT IN ACCORDANCE WITH ARTICLE 14 OF THE SPACE ACT AGREEMENT.

RESPONSIBILITIES AND SCHEDULE

DEVELOPED BY JOHNSON SPACE CENTER

TO SUPPORT ACO 2022 PROPOSAL SUBMITTED BY

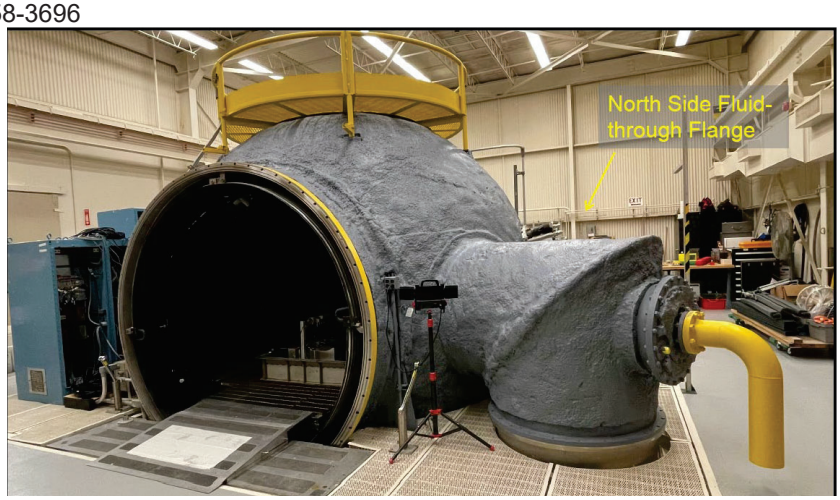
VENTURI ASTROLAB INC.

The responsibilities and schedule described relate to the ACO proposal 'Demonstrating Lunar Tire Technology Readiness'.

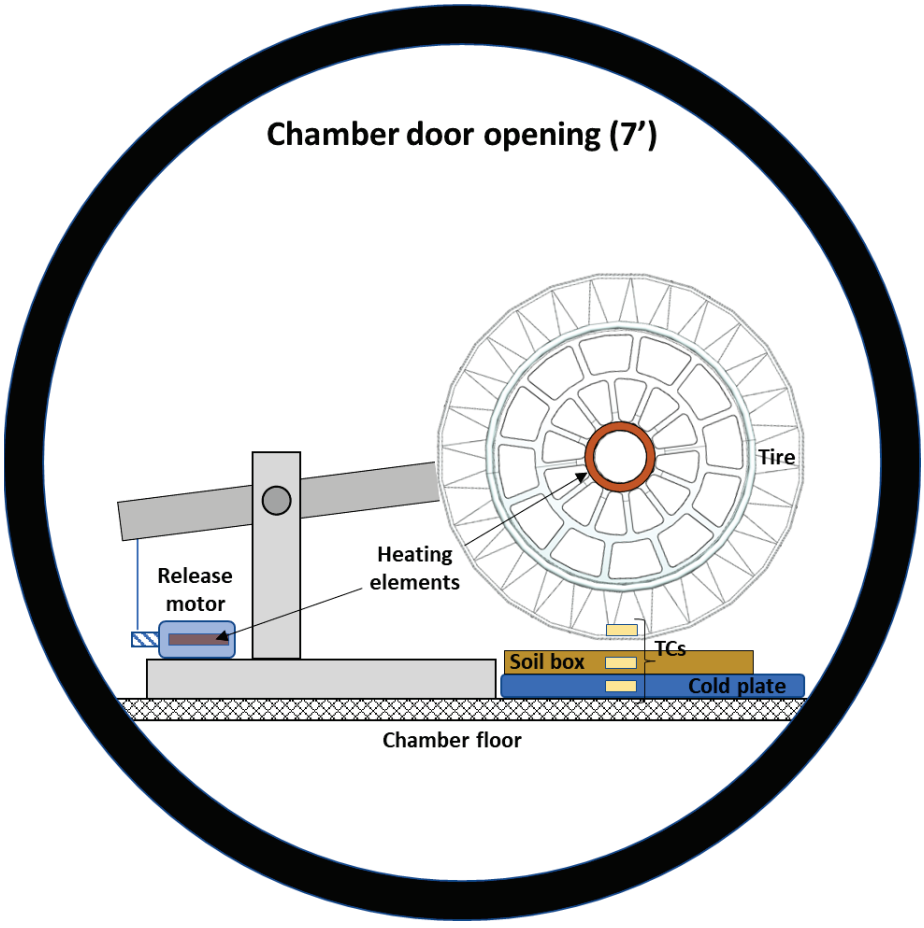
Context

JSC would participate in the proposed work by supporting thermal-vacuum (TVAC) testing of a lunar tire in the JSC B351 15ft chamber, which is depicted below.

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Lyndon B. Johnson Space Center
21201 **NASA** Parkway
Houston, TX 77058-3696



The intent of the test is to evaluate thermal transfer from the test tire to lunar soil simulant and evaluate the state of the tire after exposure to 150 hours of cold temperature (simulating lunar night). As illustrated below the test would utilize a test apparatus that enabled the tire to be loaded onto lunar soil simulant, while the temperature of the tire and soil are controlled inside the TVAC chamber. The details of the test are described in the proposal.



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Houston, TX 77058-3696



1. RESPONSIBILITIES

A. **JSC** will use reasonable efforts to:

1. Ready the TVAC chamber to establish the specified temperature and vacuum levels.
2. Setup signal conditioning and data acquisition to acquire up to 10 thermocouple signals during the test.
3. Provide electrical pass-throughs for 10 thermocopules, 2 heater control lines and 1 motor power line.
4. Provide and install a cold plate (assumes soil box is ~2'x2'x6" deep).
5. Install the test apparatus (provided by Astrolab) in the TVAC chamber.
6. Connect the thermocouples (provided by Astrolab) to the signal conditioner.
7. Run the motor and heater lines (Provided by Astrolab) through the chamber pass-throughs.
8. Execute all functions of the facility and temperature data aquation to support the test steps described in the proposal.
9. Provide the time-history data of all temperature measurements for the duration of the test.
10. Provide a test report describing the time history of the test conditions and measurements taken.

B. **Astrolab** will use reasonable efforts to:

1. Provide the tire test article.
2. Provide the tire test apparatus, including the lunar soil simulant.
3. Instrument test apparatus with thermocouples.
4. Ship the test article and apparatus to JSC.
5. Execute all functions of the test apparatus to support the test steps described in the proposal. This includes preparing the soil to a specific density and water content.
6. Analyze the test data and produce outcomes for the ACO reports.

2. SCHEDULE

The planned schedule for the activities with Venturi Astrolab Inc. as defined in Paragraph 1. RESPONSIBILITIES are as follows:

Completion dates are expressed below relative to the project kickoff (ko).

Ready the test rig and associated instrumentation for testing round 1	ko + 1m
Support the execution of round 1 testing and provide the resulting test data and report	ko + 3m
Ready the test rig and associated instrumentation for testing round 2	ko + 9m
Support the execution of round 2 testing and provide the resulting test data and report	ko + 11m

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3. COST

Center Contribution	**FY23**	**FY24**
Total Travel Dollars ($k)	0	0
Total Labor Dollars ($k)	219	170
Total Procurement Dollars ($k)	128	43
Sub Totals($k)	347	213
Grand Total ($k)	560	

4. POINTS OF CONTACT

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

JSC

Nicholas Skytland

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VENTURI ASTROLAB INC.

Vivake Asnani

12536 Chadron Ave.,

Hawthorne, CA 90250
P: 614-284-6680
vivake.asnani@venturiastrolab.com

5. MODIFICATIONS

Any modification to this Responsibilities and Schedule document set forth herein after award shall be documented in writing, and signed by both the Johnson Space Center and Venturi Astrolab Inc. Modification of this Responsibilities and Schedule document does not modify the terms of the Space Act Agreement.

6. SIGNATORY AUTHORITY

National Aeronautics and
Space Administration
Lyndon B. Johnson Space Center
21201 **NASA** Parkway
Houston, TX 77058-3696

The signatory to this Responsibilities and Schedule document represents and warrants that he/she has authority to commit Johnson Space Center to support Venturi Astrolab Inc. if selected for award.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Johnson Space Center

NICHOLAS SKYTLAND Digitally signed by NICHOLAS SKYTLAND
Date: 2022.11.15 19:54:22 -05'00'

BY:_____

Nicholas Skytland, JSC Chief Technologist
Director of the Office of Business Development and Technology Integration