

ANNEX NO. 02
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE CENTER
AND
FIREFLY AEROSPACE INC.
UNDER SPACE ACT UMBRELLA AGREEMENT
NO. SAA-RA-23-37611
FOR CAMERA MEASUREMENT AND ANALYSIS

ARTICLE 1. PURPOSE

The purpose of this Annex is for NASA JSC to provide measurements for a specific camera to be provided by the Partner. NASA JSC will provide a measured camera boresight vector with respect to the camera body using metrology equipment, expertise, and analysis. NASA JSC's camera measurement activities will be conducted in the Electro-Optics Lab in JSC Building 16. The Electro-Optics Lab has developed this specific type of measurement for optical navigation, which requires much higher resolution calibration than what is typically available in industry. The Partner will supply supporting equipment with the camera and will be present during NASA JSC's camera measurement activities. Providing this service will also allow for NASA JSC personnel to gain valuable experience in using laboratory equipment, working with commercial partners, and taking measurements that are similar to those needed by optical sensors on other NASA programs.

The legal authority for this Annex, consistent with the Umbrella Agreement, is in accordance with the Space Act, Other Transactions Authority (OTA), 51 U.S.C. § 20113(e).

ARTICLE 2. RESPONSIBILITIES

NASA will use reasonable efforts to:

1. Provide the metrology equipment needed to make the requested camera measurements.
2. Conduct a dry run of the planned measurement activities.
3. Perform a high fidelity calibration of the Partner's camera in order to accurately associate the metrology measurements with the camera images.
4. Perform the measurements needed to estimate the camera's boresight vector and provide the results to the Partner.
5. Provide technical expertise and analysis of the camera measurements made.

Firefly will use reasonable efforts to:

1. Provide the specific camera to be measured to NASA JSC so that the requested measurements can be taken.

2. Provide camera ground support equipment and mounting hardware to NASA JSC, in order to allow the camera to be powered and controlled such that it can be used to take images during NASA JSC's measurement activities.
3. Provide software to control the camera during NASA JSC's measurement activities.
4. Provide personnel to assist with operation of the camera during NASA JSC's measurement activities.

ARTICLE 3. SCHEDULE AND MILESTONES

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

NASA JSC will conduct dry run of measurement activities	Effective Date (ED) + 2 weeks
NASA JSC will begin measurement activities with Partner's camera	ED + 4 weeks
NASA JSC will deliver measurement results to Partner	ED + 6 weeks
Follow-up telecon meetings between NASA JSC and Partner, to address any Partner questions about the results	Every 2 weeks

ARTICLE 4. FINANCIAL OBLIGATIONS

A. Partner agrees to reimburse NASA an estimated cost of \$20,029.85 for NASA to carry out its responsibilities under this Annex. Each payment shall be marked with JSC and Annex No. 02.

B. NASA will not provide services or incur costs beyond the current funding. 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 Annex will be accomplished for the estimated amount. Should the effort cost more than the estimate, Partner will be advised by NASA as soon as possible. Partner shall pay all costs incurred and have the option of canceling the remaining effort, or providing additional funding in order to continue the proposed effort under the revised estimate. Should this Annex be terminated, or the effort completed at a cost less than the agreed-to estimated cost, NASA shall account for any unspent funds within one year after completion of all effort under this Annex, and promptly thereafter, at Partner's option return any unspent funds to Partner or apply any such unspent funds to other activities under the Umbrella Agreement. Return of unspent funds will be processed via Electronic Funds Transfer (EFT) in accordance with 31 C.F.R. Part 208 and, upon request by NASA, Partner agrees to complete the Automated Clearing House (ACH) Vendor/Miscellaneous Payment Enrollment Form (SF 3881).

ARTICLE 5. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

A. Data produced under this Annex which is subject to paragraph C. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement will be protected for the period of one year.

B. Under paragraph H. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement, 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 provided.

1. Background Data:

The Disclosing Party's Background Data, if any, will be identified in a separate technical document.

2. Third Party Proprietary Data:

The Disclosing Party's Third Party Proprietary Data, if any, will be identified in a separate technical document.

3. Controlled Government Data:

The Disclosing Party's Controlled Government Data, if any, will be identified in a separate technical document.

4. The following software and related Data will be provided to Partner under a separate Software Usage Agreement:

None

ARTICLE 6. TERM OF ANNEX

This Annex 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 six months from the Effective Date, whichever comes first, unless such term exceeds the duration of the Umbrella Agreement. The term of this Annex shall not exceed the term of the Umbrella Agreement. The Annex automatically expires upon the expiration of the Umbrella Agreement.

ARTICLE 7. RIGHT TO TERMINATE

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

ARTICLE 8. POINTS OF CONTACT

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

Management Points of Contact

NASA Lyndon B. Johnson Space Center
Shirley Holland-Hunt
Assistant Chief, Aeroscience &
Flight Mechanics Division
Mail Stop: EG1
2101 NASA Parkway
Houston, Texas 77058
Phone: (281) 483-1348
shirley.m.holland-hunt@nasa.gov

FIREFLY AEROSPACE INC.
Ray Allensworth
Director, Spacecraft
1320 Arrow Point Drive
Cedar Park, TX 78613-2169
Phone: (512) 277-6959
rachel.allensworth@fireflyspace.com

Technical Points of Contact

NASA Lyndon B. Johnson Space Center
David W. Saley
Deputy Chief, GN&C Development
& Testing Branch
Mail Stop: EG2
2101 NASA Parkway
Houston, Texas 77058
Phone: (281) 483-0998
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FIREFLY AEROSPACE INC.
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Chief Technical Officer, Engineering
1320 Arrow Point Drive
Cedar Park, TX 78613-2169
Phone: (512) 277-6959
shea.ferring@fireflyspace.com

ARTICLE 9. MODIFICATIONS

Any modification to this Annex shall be executed, in writing, and signed by an authorized representative of NASA and the Partner. Modification of an Annex does not modify the terms of the Umbrella Agreement.

ARTICLE 10. SIGNATORY AUTHORITY

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

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE
CENTER

FIREFLY AEROSPACE INC.

BY: _____
Julie Kramer White
Director of Engineering

BY: _____
David Wheeler
General Counsel

DATE: _____

DATE: _____