Starlab and the Center for Space and Aviation Switzerland and Lichtenstein Pathways to Space Commercialization

Call for Proposals for Access to Microgravity for Market Readiness Maturation

Overview

Starlab Space and the Center for Space and Aviation Switzerland and Lichtenstein (CSA) are pleased to release this Call for Proposals (CFP), inviting innovative teams and organizations to explore how the unique microgravity environment can generate value on Earth. Through this CFP, Starlab seeks to support promising concepts with potential business or real-world applications that currently have limited or no access to microgravity. More than just a space station, **Starlab is an ecosystem designed to give organizations worldwide access to the opportunities offered by microgravity**. Starlab is building a space station that can serve as a platform for innovative business models, based in part on terrestrial markets. **This CFP supports teams in maturing their business models on the International Space Station (ISS), with the ultimate goal of enabling them to use the Starlab Space Station for scaled, sustainable operations**.

Many innovative space-enabled business ideas require data and experimentation in microgravity to demonstrate the feasibility of the underlying business model, assess potential return on investment, and improve scientific, technical, or process performance. Yet **access to microgravity remains a significant barrier to testing and advancing these ideas.** By providing access to the ISS through this initiative, Starlab aims to help organizations generate the evidence needed to advance their concepts toward viable applications and, ultimately, potential commercialization and use aboard Starlab.

This CFP is intended for **teams and organizations with innovative concepts for using microgravity to generate value but with limited or no existing access to space.** Proposed investigations should generate meaningful data and insights that advance the underlying scientific, technological, process, or business case, while clearly articulating how the results could inform subsequent R&D, technology maturation, scale-up, commercialization, and future operations in space.

Organizations selected through this CFP will retain ownership of their intellectual property as detailed in the terms and conditions. Starlab's objective is to provide access to the unique research environment and capabilities of space, enabling innovators to develop and validate their own ideas and accelerate their path toward sustainable in-space operations for terrestrial markets.

Research applications utilizing the hardware offered may include, but are not limited to:

- Microorganisms
- Mammalian Cells & Tissues
- Viruses & Bacteria
- Protein Crystal Growth
- Fluid Dynamics & Mixing
- Biomaterials
- Small Plants / Seed Germination

Proposed investigations should clearly **articulate how the expected results will advance the business case, what further development would be required, which markets could ultimately be affected, and how the results could contribute to future commercialization or utilization, including potential operations aboard Starlab.**

In keeping with Starlab's global heritage and expertise, this CFP is open to teams and organizations worldwide. We invite innovators everywhere to demonstrate how access to space can create new value for people, industries, and society on Earth.

This initiative is the first of several calls expected to be offered by Starlab for market readiness maturation payloads to the ISS and other Low Earth Orbit (LEO) platforms prior to the commencement of operations on Starlab. Awardees from a call may be eligible for future calls in order to further test and mature their business cases.

This CFP anticipates making **up to four awards**: one Starlab-funded award open to a principal investigator from an organization based anywhere in the world, and up to three additional awards for applicants that are either affiliated with institutions or companies based in the Canton of Zurich or demonstrate an active collaboration with institutions or companies based in the Canton of Zurich, Switzerland. The latter awards are offered through a joint opportunity funded by Starlab and the Center for Space and Aviation Switzerland and Liechtenstein (CSA).

For the Canton of Zurich awards, eligible proposal teams must either include a principal investigator affiliated with an institution or company based in the Canton of Zurich, or demonstrate an active collaboration between the applicant or proposal team and an institution or company based in the Canton of Zurich. Co-investigators from outside the Canton of Zurich may participate as part of such proposal teams. Starlab, CSA, and the Canton of Zurich are using this

funding opportunity to demonstrate how space-related research and technology development can be advanced through a commercially driven model, enabling experiments and related activities to be developed, executed, and utilized more rapidly and efficiently. All team members participating in awarded proposals must meet the Eligibility Criteria described below, as well as any applicable export control and sanctions screening requirements.

Objective of the Call

The objective of this CFP is to support teams who need access to space to mature their microgravity-based science, engineering, processes, and/or business model. These results are intended to help establish clearer evidence of the potential benefits of microgravity within specific market segments.

Through this opportunity, Starlab aims to:

- Enable researchers and technology developers to obtain microgravity-based data
- Support investigations that interrogate advantages of microgravity compared to terrestrial approaches
- Reduce barriers to entry for fields where limited microgravity data currently constrains engagement
- Contribute to building a thriving and sustainable community of microgravity users
- Identify promising investigation fields suitable for upscaling by third parties in our Starlab Space Station

Supported investigations are expected to contribute data that advances the collective understanding of where and how microgravity can create meaningful commercial value.

Hardware

The hardware supporting this solicitation is the BioServe Space Technologies' Group Activation Pack (GAP), which contains eight Fluid Processing Apparatuses (FPAs). A GAP enables the simultaneous mixing of the contents of chambers within each of the eight FPAs. This allows, for example, for the controlled activation and termination of an experiment in space.

More information may be found here: https://www.colorado.edu/center/bioserve/spaceflight-hardware/fpagap. This link is provided for convenience only; Starlab Space, LLC does not control and is not responsible for third-party content, and the information at the link may change.

Additionally, proposers may read how FPAs and GAPs have been used in space in the past by looking up literature that includes "Fluid Processing Apparatus."

Eligibility Criteria (all opportunities)

- Principal Investigator (PI) must be at least 18 years old by the date of Step-1 proposal submittal
- Each proposer (and each proposed team member, as applicable) must: (i) be legally permitted to participate in this CFP and any resulting award under applicable laws and regulations; (ii) not be suspended, debarred, or otherwise ineligible to receive awards under applicable government programs; (iii) not be a prohibited or restricted person and not be located in a prohibited or restricted country/region; and (iv) have the right, authority, and any required internal approvals to submit the proposal and to enter into an award agreement if selected.
- Where the proposed work involves biological materials, human-derived materials, pathogens, toxins, or other regulated materials or activities, proposer must be capable of obtaining and maintaining all required permits, licenses, and institutional approvals (e.g., biosafety approvals, as applicable) prior to commencing work and in time to meet the anticipated schedule. Starlab Space, LLC may request documentation of any such approvals.
- Starlab Space, LLC may request additional information to confirm eligibility at any time and may disqualify any proposer or decline to make an award if it determines any eligibility requirement is not met or cannot be verified.

Eligibility Criteria (specific to the Starlab-CSA-Canton of Zurich opportunities)

In addition to the Eligibility Criteria set forth above, applicants for the Starlab-CSA (Canton of Zurich) opportunities must demonstrate a substantive connection to the Canton of Zurich. This requirement may be satisfied either by (i) a Principal Investigator affiliated with an institution or company based in the Canton of Zurich, or (ii) an active and demonstrable collaboration between the applicant or proposal team and an institution or company based in the Canton of Zurich. Co-Investigators and other team members may be based outside the Canton of Zurich, provided that all applicable Eligibility Criteria and export control and sanctions screening requirements are met.

Key Dates - UPDATED

All dates are estimates and are 2026 (unless otherwise noted) and the time for each date is 23:59:59 Eastern Time**. Starlab Space, LLC may modify any date, deadline, process step, or anticipated schedule at its discretion.**

- Step-1 Proposal Call Opens: September 11
- Last day to submit Step-1 proposal questions: September 25
- **UPDATED: Step-1 Proposal Submission Deadline: October 21**
- UPDATED: Step-2 Invitations Sent: October 28
- Last day to submit Step-2 proposal questions: November 6
- **Step-2 Proposal Submission Deadline: November 24**
- Anticipated award notifications sent to proposers: December 18, 2026
- Anticipated Project Performance Period: February 1, 2027 – June 30, 2028
- Anticipated Flight Date: Q1 2028. This date is indicative only and is subject to change, postponement, or cancellation based on ISS, launch-provider, integration, safety, regulatory, funding, and third-party partner schedules, funding and requirements. No specific flight date is guaranteed.
- For the Starlab-CSA-Canton of Zurich Awards, project performance periods and anticipated flight dates may vary between individual Awards and may be scheduled or staggered in accordance with applicable funding mechanisms and CSA's Scaling Innovations Pipeline.

Award Info

If Starlab Space, LLC makes an award, selected proposals may be awarded the opportunity for the project to be flown to and conducted on ISS, subject to an award agreement and any additional terms and conditions. Costs for payload launch, upmass, downmass, and crew time will be covered only as described in the award agreement. Additionally, implementation partner support (from BioServe) for payload integration and on-orbit operations will be covered only as described in the award agreement. No additional funding will be provided for the proposing team to support their internal costs as part of any award.

No Entitlement to Flight; Scheduling and Cancellation

Selection for an Award, execution of an Award Agreement, or completion of payload development or integration activities does not create or confer any right, entitlement, or guarantee that a payload will be launched, flown, operated on the ISS or any other space platform, or returned to

Earth. Any flight opportunity remains subject to technical and safety approval, payload readiness and integration, launch and platform availability, crew and third-party partner schedules, regulatory and export-control requirements, funding availability, and other applicable operational conditions.

Starlab Space, LLC and, with respect to the Starlab-CSA-Canton of Zurich Awards, CSA reserve the right to delay, reschedule, reassign, suspend, modify, or cancel a planned flight opportunity, in whole or in part, including as a result of unforeseen circumstances, launch delays or cancellations, changes to ISS or other platform schedules, technical or safety constraints, regulatory requirements, decisions by third-party partners, funding constraints, or other circumstances beyond their reasonable control. Unless expressly provided otherwise in the applicable Award Agreement, an Award does not create an entitlement to a replacement or subsequent flight opportunity.

Total Anticipated Awards: 4

Subject to the applicable Award Agreement and operational availability, each selected proposal is anticipated to have the use of one GAP as described above in Hardware.

Breakdown of Awards:

- **Starlab-CSA (Canton of Zurich) Awarded Project #1, #2, #3:** The PI must either be affiliated with an institution or company based in the Canton of Zurich and/or demonstrate an active collaboration with an institution or company based in the Canton of Zurich. The PI must also meet the Eligibility Criteria described above. The team may include Co-Is from institutions or companies outside the Canton of Zurich, provided that they meet the applicable Eligibility Criteria as well as any relevant export control and sanctions screening requirements. CSA expressly reserves the right to allocate and schedule the Awards within the framework of planned or future innovation funds and/or its Scaling Innovations Pipeline, including the option to allocate and stagger the Awards over time. In exceptional and duly justified cases, CSA may, at its sole discretion and subject to funding, technical feasibility, operational availability, and all applicable approvals, support an applicant through multiple sequential flight campaigns. Eligibility for, or participation in, one flight campaign does not create any entitlement to a subsequent flight campaign.
- **Starlab Awarded Project #4:** PI can be located anywhere provided they meet the Eligibility Criteria **and any applicable export control and sanctions screening requirements.**

Proposal Submission Process

This call follows a two-step submission process:

Step-1 Proposal: A brief submission (max. 2 pages) to assess scientific merits, technical and operational feasibility, commercial/economic impact, and team capability

Step-2 Proposal: Teams selected from Step-1 invited to submit a full, 8-page proposal expanding on scientific, technical and operational, commercial/economic, and managerial details

Proposal Format

All proposals must be:

- Submitted as PDF, letter-size
- Single-spaced, one-column layout, with 1-inch margins
- Written in Times New Roman, 12 pt font
- Text in figures, tables, and captions must also be 12 pt font

Step-1 Proposal Contents (max. 2 pages)

1. Executive Summary: Max. 100 words. Shall contain information on each of the segments of the Step-1 proposal described below.

2. Commercial Applications: Describe how the data generated from this payload can lead to future commercialization; this can include for terrestrial and/or space-based markets.

3. Scientific Rationale: Describe the background theory, the scientific hypothesis, and how the need for long-duration microgravity on board ISS can lead to new scientific discovery, as applicable. Describe the scientific objectives, as applicable.

4. Technical Aspects: This section describes the specific experimental requirements, procedures, desired outcomes, and data analysis methodologies, as applicable. Include how the FPA/GAP hardware will enable/support the scientific objectives to be met.

5. Project Team: Indicate the name of each leadership position and briefly describe their previous experience that will enable them to fulfill their responsibilities within this project.

6. Resources: With this call providing no funding to support internal costs, please describe how those costs will be defrayed. Also please describe any in-kind contributions the team or its respective organizations, in case they exist, will provide.

7. References and Citations: Does not count against the page limit.

Step-2 Proposal Contents (max. 8 pages)

The Step-2 Proposal shall be stand-alone, i.e. reviewers **will not** re-read or re-review the Step-1 proposal, except to ensure the Step-1 approved project did not significantly change in Step-2.

1. Executive Summary: Max. 200 words. Shall contain information on each of the segments of the Step-2 proposal described below.

2. Commercial Applications: See corresponding Step-1 Proposal section for instructions. Please include description of how this project could lead to future research/demonstrations and possible commercialization using the Starlab platform.

3. Scientific Rationale: See corresponding Step-1 Proposal section for instructions.

4. Technical Aspects: See corresponding Step-1 Proposal section for instructions.

5. Project Team: See corresponding Step-1 Proposal section for instructions.

6. Project Management: Description of how the project will be managed, including schedules and milestones, budgets, roles and responsibilities, work breakdown structures, or any other aspects that may help reviewers assess the team's probability of successfully completing the project.

7. Resources: See corresponding Step-1 Proposal section for instructions. Include what on-ground equipment, facilities, infrastructure, tools, and materials the team will use to support the project.

8. Connection to Canton of Zurich: In order to be considered for any of the Starlab-CSA-Canton of Zurich awards, proposing teams must meet the Eligibility Criteria specific to the Starlab-CSA-Canton of Zurich opportunities as described on Page 4 of this CFP document. Please describe how the proposing team meets this specific Eligibility Criteria. If the proposing team does not meet the Eligibility Criteria, this section may be omitted. This section does not count against the 8-page limit.

9. References and Citations: Does not count against the 8-page limit.

10. One-page CV of each leadership member: Does not count against the 8-page limit. CVs shall follow the same format requirements as the rest of the proposal and are limited to one page per leadership position member. Leadership positions could include Principal Investigator, Co-Principal Investigator, Co-Investigator, Project Manager, Team Lead, or System Engineer, as applicable to each proposal (i.e., it is not expected that each project will need each of these positions).

10. Letters of Support: Does not count against the 8-page limit.

Proposal Evaluation

Proposals will be evaluated to the extent to which the proposal supports a credible pathway toward using microgravity for value generation. While it is recognized that a single experiment is unlikely to result in a market-ready product, proposers should clearly describe how the proposed work fits within a broader development roadmap.

Starlab plans to have more CFPs in the future to support its future customers in maturing their business models.

Submissions should articulate how the anticipated results would inform subsequent steps needed to mature the concept, technology, or application. This includes identifying logical follow-on experiments, technical milestones, or validation activities that would advance the work toward practical implementation or broader adoption.

Strong proposals will demonstrate an understanding of how the data generated in this investigation could contribute to demonstrating the value of microgravity within a specific field and how that evidence may support future development efforts. Consideration will be given to the clarity and plausibility of the proposed progression from this initial study to more advanced stages, including potential scaling, continued experimentation, and eventual use of the Starlab Space Station for upscaled and sustainable operations.

Preference will be given to proposals that:

- Describe a clear development pathway beyond the proposed experiment.
- Identify how results would inform subsequent technical or translational milestones.
- Generate data relevant to clearly defined application areas, such as (but not exclusive to) drug discovery and development, disease and aging models, regenerative medicine, biomaterials and biomanufacturing, in-space manufacturing and servicing, colloids, advanced materials, and other fields where microgravity may demonstrate meaningful scientific or practical value.
- Provide comparative or performance-based insights where feasible.
- Enable follow-on studies or technology maturation.
- Contribute to building evidence supporting sustained microgravity utilization.
- Clearly state why microgravity is needed.

Evaluation Criteria

Proposal reviewers will be asked to score the merit of each proposal in each category, using the following questions as guidance. Please make sure your proposal addresses the questions mentioned below in the appropriate sections of the proposal.

1. Potential Future Business Opportunities (35%): If successful, how likely is this project to be able to continue its maturation towards potential commercialization? Does the proposal indicate what work would follow on from this experiment to further mature the project, including how it could be developed further (or commercialized) on Starlab? What markets could this research impact?

2. Scientific Merit (20%): Has the proposal made clear the need for why long-term microgravity could advance the knowledge of a specific area? What relevant background research (theoretical or experimental) has been done? Have the scientific hypothesis and objectives of the project been clearly identified?

3. Technical and Operational Feasibility (20%): Have the experimental requirements (temperature profile, pre-launch handover and post-return recovery timelines, activation and/or termination of the experiment if applicable, data collection, etc.) been identified? Will the FPA/GAP be able to meet those experimental requirements? How will data from the experiment be analyzed?

4. Team Constitution & Qualifications (10%): Does the team have the required background and expertise to fulfill their respective roles in this project?

5. Facilities & Equipment (10%): In addition to what is being offered as part of the award (flight hardware, payload integration, upmass, downmass, launch, crew time, on-orbit operations support) does the proposal clearly show the team has all other necessary on-ground equipment, facilities, infrastructure, tools, and materials needed to successfully complete the proposed project?

6. Project Management (5%): Does the team have the appropriate organization to bring the project to successful completeness on time? Have possible risks and mitigation plans been identified?

Non-Responsive Proposals

Proposals will be considered non-compliant and will not be evaluated if any one or more of the following is true:

- The proposal was submitted past the deadline (as determined by Starlab Space, LLC in its sole discretion).
- The proposal was submitted not following format requirements (and Starlab Space, LLC has not waived such noncompliance in writing).
- The proposal is not aligned with the objectives of this call.
- The Step-2 proposal changed the topic or approach from the invited Step-1 proposal (team changes are acceptable as described above).
- Any of the eligibility requirements are not met.

Starlab Space, LLC reserves the right to: (i) determine, in its sole discretion, whether a proposal is compliant and responsive; (ii) request clarifications or additional information; (iii) waive minor informalities or irregularities; and (iv) reject any or all proposals, in whole or in part, at any time, without liability.

Note: Each proposal will be reviewed exclusively by its contents; reviewers will be instructed not to follow hyperlinks and not to read appendices that were not included in the contents structure described in this CFP.

How to Apply

Proposals shall be submitted as one single document before the respective deadline in PDF format using the Proposal Submission Form and Submission Button on the proposal website: starlab-space.com/call-for-proposal/. The uploaded file name shall read "Response_to_Starlab_CFP_X" where X is the full name of the PI. Do not include confidential, proprietary, or trade secret information in your submission.

Questions

Please send your questions before the questions deadline to StarlabCFP@starlab-space.com. Please be aware that, for fairness and transparency, each question received and the answer provided may be included in a publicly available Questions & Answers (Q&A) section on the proposal home page for all proposers to see *(so do not include confidential, proprietary, trade secret, or other sensitive information in your question)*.

IMPORTANT NOTICE – NON-BINDING SOLICITATION; NON-CONFIDENTIAL SUBMISSIONS; OTHER TERMS APPLY

By submitting your proposal, you confirm you understand that if Starlab Space, LLC continues to consider your proposal and/or makes an award, additional terms and conditions will apply.

This is only a call for proposals (an "CFP") so Starlab Space, LLC can evaluate ideas. It is not a contest, and sending a proposal does not guarantee selection, funding, an award, a contract, or any other benefit. Starlab Space, LLC may change timelines, requirements, or scope, ask questions, negotiate with any or no submitters, run discussions, choose to award or not award, or cancel this CFP at any time. This CFP is provided "as is," without warranties, and Starlab Space, LLC is not responsible for mistakes in the CFP or for decisions you make based on it. You are responsible for all costs of preparing and submitting your proposal; Starlab Space, LLC will not reimburse you. Starlab Space, LLC is not required to keep proposals open, respond to proposals, or provide feedback. If Starlab Space, LLC offers funding or enters into an award, contract, or other arrangement, additional terms and conditions will apply and will control. Submitting a proposal does not create any agency, partnership, joint venture, employment, or exclusivity relationship. For clarity, neither selection for an Award nor entry into an Award Agreement guarantees that a payload will be launched or flown; any flight opportunity remains subject to the applicable Award Agreement and to technical, safety, operational, regulatory, funding, launch, platform, and third-party constraints.

Please do not include confidential information, proprietary information, trade secrets, or other sensitive information in your submission. Submissions are non-confidential, and receiving or reviewing your submission does not create any confidential relationship or obligation to restrict use. If you include confidential information anyway, you do so at your own risk, and Starlab Space, LLC has no duty to protect, segregate, or return it. Starlab Space, LLC may already be working on similar ideas and may develop similar or competitive ideas independently. Your submission does not give you any rights in Starlab Space, LLC's products, services, or plans, and nothing in this CFP grants you any license to Starlab Space, LLC intellectual property. By submitting, you represent and warrant that your submission is non-proprietary, non-confidential, and based only on public sources or your own independently developed work that you can freely share.

Submit only material you have the right to share. You are responsible for making sure your submission does not copy, misuse, or infringe anyone else's rights. Other than the limited evaluation license in this paragraph, you retain all right, title, and interest in and to your submission. By submitting, you give Starlab Space, LLC a non-exclusive, worldwide, royalty-free license to use, copy, display, and share your submission internally **only to evaluate it** and for

compliance/audit purposes, including sharing with its affiliates, advisors, and reviewers. Starlab Space, LLC is not obligated to treat submissions as confidential, to limit access beyond its internal processes, or to return or destroy submissions.

Starlab Space, LLC must follow U.S. export control and sanctions laws. By submitting, you confirm you will comply with these laws and that you are not a prohibited or restricted person, and you are not located in a prohibited or restricted country/region. You may be asked for information (including export classification and end-use/end-user information) to help Starlab Space, LLC confirm compliance, and Starlab Space, LLC may disqualify any proposer or decline to make an award if it determines compliance requirements cannot be satisfied.

Starlab Space, LLC does not discriminate in this CFP process or any resulting award based on race, color, national origin, religious affiliation, disability, gender, or sexual orientation.

By submitting a proposal, you confirm that what you submit is true and that you will promptly update Starlab Space, LLC if important details change. Starlab Space, LLC may process personal data in your submission to evaluate it, run this process, and for compliance and recordkeeping. Starlab Space, LLC may keep copies as long as needed for its business needs and for legal or audit purposes, and may delete information at its discretion.