

Ramon Foundation
Call Proposal Submission Period: December 22th 2020 to February 14st 2021



Israel Ministry of
Science & Technology
משרד המדע והטכנולוגיה



Call for Proposals

Proposed Experiments to be performed at the International Space Station

Astronaut for Israeli Science & Education (AISE)

General Background and Instructions

INTRODUCTION

The Ramon Foundation, non-governmental organization (NGO), that promotes themes of space and aviation aiming to encourage personal excellence and community involvement, together with the Israeli Space Agency at the Israeli Ministry of Science and Technology, are pleased to announce this call for proposals. We wish to follow in Ilan Ramon's footsteps and empower the Israeli space eco-system.

In November 2020, we announced the first Israeli private astronaut's mission, the second Israeli in space, Mr. Eytan Stibbe, who will fly on a ten-day mission onboard the Axiom Space Ax-1 Flight, the first ever commercial human spaceflight mission to the International Space Station (ISS).

One of the central pillars of AISE mission is to support the promotion of the Israeli space sector and enhance innovation in the field while simultaneously positioning Israel as a global innovation player for space technologies.

To lower the entry barriers to the space sector, the Ramon Foundation and the Israeli Space Agency at the Ministry of Science and Technology encourage Israeli scientists, researchers, startups and other entities to participate in this proposed mission and gain access to ISS scientific and tech platforms collaboration with Mr. Stibbe on this historic AISE mission.

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CALL FOR PROPOSALS SCOPE

This is a call for proposals for utilizing astronaut operating time during the Ax-1 mission, from launch to landing, Astronaut will be available for briefing, practice and preparations in Israel prior to the launch and for debriefing and summary after landing. This call is open to any Israeli organization or team that wishes to conduct experiments or demonstrate technologies aboard the ISS: Academic Institutes, research centers, not-for-profit organizations, entrepreneurs, startups, and commercial organizations. Collaboration between any of these, including with international partners, is encouraged.

This solicitation will consider ANY area of science/technology which can be performed at the International Space Station as part of Mr. Stibbe's AISE mission. Submitted proposals should demonstrate and explain the innovative approach of the project.

This opportunity is enabled by Axiom Space, Inc., a privately owned U.S. company building the world's first commercial space station as the eventual replacement to the ISS and the only company authorized to plan, train, and manage commercial missions with private astronaut customers to the ISS.

The Ax-1 mission is set to launch aboard a SpaceX Crew Dragon. To achieving the objectives of AISE mission on the Ax-1 mission, some experiment cargo may need to be launched to the ISS ahead of the Ax-1 mission. Axiom Space has an active relationship with the ISS National Lab that, among other things, permits Axiom to request and obtain transportation for Axiom customer cargo to/from the ISS on ISS Program sponsored cargo missions.

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RESOURCES

The Proposers

- All costs, including project development, modifications, packaging, shipping, and implementation partner services to conduct experiment in orbit are the responsibility of the proposers.
- Cargo capacity to the ISS is limited. All proposals will be considered equally but smaller payloads to orbit may be easier to implement on the Ax-1 mission.

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- Ramon Foundation will provide Astronaut operating time to perform the research/project/test.
- Ramon Foundation gathered scientific-technological committee including top-level multidisciplinary experts from academic institutes, governments, and space agency. This committee will perform the proposals evaluation and selection process.

The Israeli Space Agency at the Ministry of Science and Technology

- The Israeli government intends to publish during the first quarter of 2021 a call for research proposals in the area of Science and Technology to be carried out on the ISS, with government funding. Submission will be open, inter alia, to the proposes selected by this call.¹
- The Israeli Space Agency intends to contact national space agencies (NASA, ESA, etc.) and request access to their facilities onboard the ISS, if required, and subject to the approval of each agency.

Axiom Space

- Some selected proposals may need to pre-position their supplies and hardware on one of these earlier cargo missions. Axiom will provide all arrangements for this service.
- For non- governmental facilities at the ISS, Axiom space will facilitate the required arrangements.
- Each of the selected proposers will sign an agreement with Axiom Space to access to the Ax-1 mission and for any implementation partner services required on the mission and the ISS.

¹ The mentioned call for proposals is subject to the committee for special financial engagement approval appointed by the accountant general at the ministry of finance. Should the committee reject the request this call for proposals will be cancelled.

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PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

All proposers must submit the following to the submission box located in ramonfoundation.org.il by 6:00 p.m. (IST) on February 14, 2021:

1. Cover page (1-page)
2. Proposal (up to 10-pages)
3. Budget breakdown (1-page)
4. Reference list (optional; 1-page)
5. Quad chart (1-page)
6. Abstract (100 words)
7. Proposal Schedule (1-page)
8. Safety
9. Agreement with providers
10. Collaborations descriptions
11. Ethical certification if required (Helsinki committee, IRB (Independent Review Board) IEC (independence ethics committee))

Templates for the cover page, proposal, quad chart, and budget breakdown are included in the package found online at the Ramon Foundation website. All submitted documents must adhere to instructions printed in blue. Proposers must use 1-inch margins and 12-point standard font (Times or Arial).

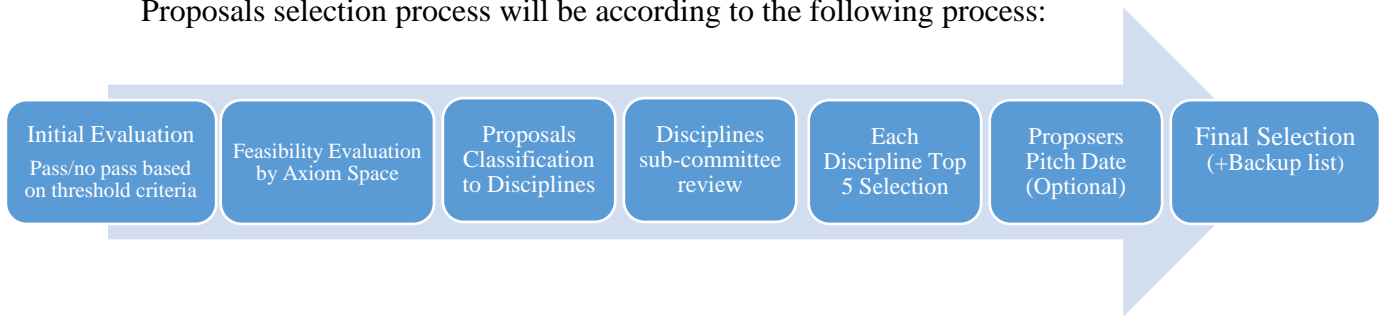
NOTE: Proposers have the responsibility to clearly explain critical details needed for the committee to properly assess the proposal. Proposers should not assume that committee are experts in the specific area, nor that the reviewers will look at any material other than what is provided in the proposal.

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General Selection Process

All proposals will be evaluated by a panel of multidisciplinary experts from academic institutes, government, and space agency.

Proposals selection process will be according to the following process:



The proposals will be evaluated according to the following prerequisites:

- Technical feasibility of the experiment to be conducted on the ISS.
- Availability of required ISS and commercial partner resources based on Ax-1 mission timeline.
- Scientific and Economic impact, novelty, and breakthrough.

Schedule

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Call for Proposals Webinar and Q&A Submission Due Date (by mail)	December 29, 2021
Q&A Document publish on the webpage	January 5, 2021
Private providers for ISS payload services webinars week	January 11-14, 2021
Proposals Due Date	February 14, 2021
Feasibility Review	February 15-21, 2021
Proposer Pitch conference (optional)	February 21, 2021
Final Selection and announcement of the Selected Proposals	February 28, 2021
Verification Plan Reviews	March-April 2021
Verification Results Report Submission	July 15, 2021
Ready to launch Design Review	August 1, 2021
Earlier launch due date (Optional)	September 1, 2021
Ready to Launch	October 1, 2021

***changes in the schedule are expected**

List of Annexes

- I. List of Implementation Partners for International Space Station (ISS) Services
- II. NDA FORMAT-Non-Disclosure Agreement

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- III. Ramon Scientific Committee Members
- IV. Pre-Position Opportunities

ANNEX I

List of Implementation Partners for International Space Station (ISS) Services

*Facilities and Capabilities overview on the International Space Station (ISS) can be found at the following link:

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https://www.nasa.gov/mission_pages/station/research/browse_facilities.

The Ramon Foundation and the Israeli Government will be able to negotiate with national space agencies (NASA, ESA, etc.), if their facilities are required.

For other facilities, at the ISS, Axiom space will facilitate the required arrangements.

Company	Website	Contact
Alpha Space	https://www.alphaspace.com/	Mark Shumbera- mark.shumbera@alphaspace.com
Axiom Space	https://www.axiomspace.com/	Christian Maender christian@axiomspace.com
BioServe	https://www.colorado.edu/center/bioserve/	Stefanie Countryman- countrym@colorado.edu
ETC	https://www.iai.co.il/p/etc	Ron Raz- razron@iai.co.il
ICECUBES	https://www.icecubesservice.com/	Hilde Stenuit- hilde.stenuit@spaceapplications.com Mauro Ricci- Mauro.Ricci@spaceapplications.com
NanoRacks	https://nanoracks.com/	Ajeeth Ibrahim- aibrahim@nanoracks.com
SpacePharma	www.space4p.com	Lihi Efremushkin- Efremushkin.lihi@space4p.com
Space Tango	https://spacetango.com/	Jana Stoudemire- jstoudemire@spacetango.com
Techshot	https://techshot.com/aerospace/technology/	Rich Boling- RBoling@techshot.com

ANNEX II

MUTUAL NON DISCLOSURE AGREEMENT

This Mutual Non Disclosure Agreement (the “**Agreement**”) is entered into as of _____ (the “**Effective Date**”), by and between **the Ramon Foundation**, an Israeli

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registered association (the “**Foundation**”), and _____, [Foundation number/Passport Number] _____, having its principal place of business at _____ (the “**Applicant**”).

WHEREAS the Foundation, and an committee appointed and acting on behalf of the Foundation (the”**Committee**”), wishes to evaluate Applicant’s proposal, submitted with respect to the Call for Proposal for Experiments to be Performed at the International Space Station, dated _____ (the “**Purpose**”), in the course of which Recipient may be exposed to certain Confidential Information (as such term is defined herein); and

WHEREAS each Party is willing to provide the other Party (as applicable, the “**Discloser**” to the “**Recipient**”) with such Confidential Information, provided the Confidential Information is properly protected and preserved from dissemination or improper use;

NOW THEREFORE, each Party, as Recipient, intending to be legally bound, hereby undertakes towards the other Party as follows:

1. Confidential Information

1.1. All information disclosed by the Discloser to the Recipient, whether in tangible form (including electronic or magnetic media) or verbally (the “**Confidential Information**”), shall be deemed furnished in confidence and shall be subject to the terms and conditions hereunder.

For the avoidance of doubt, the term “**Discloser**” shall be deemed to include any and all of Discloser’s affiliates (*i.e.* entities directly or indirectly under control, common control, or in control of Discloser).

1.2. By way of illustration, such Confidential Information shall include any information that by its nature may be deemed as confidential or proprietary, as well as, *inter alia*, the following information, however documented or disclosed – (i) any and all information regarding software, hardware, prototypes, product specifications, data, trade secrets, research, software codes and designs, algorithms, patent applications, laboratory notebooks, sequences, regulatory information, medical reports, clinical data and analysis, reagents, cell lines, biological materials, know-how, processes, formulas, methods, inventions and ideas, past, current and planned development or experimental work, systems and structures of the Discloser, and any other information, however documented of the Discloser; (ii) any and all information concerning the business of the Discloser (which may include legal information, financial statements and projections, forecasts, plans, key personnel, training, techniques, materials, customer lists, price lists and market studies); (iii) information of third parties as to which the Discloser may have an obligation of confidentiality; and (iv) any and all notes, analysis, studies, summaries, and other material containing or based, in whole or in part, on any information included in the foregoing.

1.3. Confidential Information shall not include information which the Recipient can prove: (i) is in, or becomes part of the public domain through no wrongful act of the Recipient or on his behalf; (ii) was already known to Recipient prior

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to disclosure by the Discloser; (iii) is later disclosed to Recipient by a third party who is under no confidentiality obligation as to the information involved; or (iv) was independently developed or discovered by the Recipient without use of the Discloser's Confidential Information.

- 1.4. Confidential Information shall not be deemed to be in the public domain merely because any part of the Confidential Information is embodied in general disclosure or because individual features, components or combinations thereof are now or become known to the public.
- 1.5. For the avoidance of doubt, disclosure of the terms and the existence of this Agreement by a Party in connection with a due diligence inquiry and subject to confidentiality undertakings similar to the terms hereof shall not be considered to be a breach of this Agreement.

2. Secrecy

- 2.1. The Recipient acknowledges that its access to any Confidential Information is essential to the performance of the Purpose, and that the Confidential Information is disclosed solely for such Purpose.
- 2.2. The Recipient further recognizes and acknowledges that the Confidential Information is a valuable and unique asset of the Discloser, and that its use or disclosure would cause the Discloser substantial loss and damages.
- 2.3. The Recipient undertakes and agrees as follows:
 - 2.3.1. It will hold all Confidential Information in complete confidence, exercising at least the same degree of care as used by it to protect its own proprietary or Confidential Information, and in any event no less than a reasonable degree of care for the relevant type of Confidential Information.
 - 2.3.2. It will restrict disclosure of the Confidential Information solely to those Representatives (as such term is defined herein), whose knowledge of the Confidential Information is necessary for the Purpose, and subject to those Representatives receiving the Confidential Information undertaking confidentiality obligations at least restrictive as set forth herein.
 - 2.3.3. It will not make use of any such Confidential Information for its own purposes or for the benefit of any other party.
 - 2.3.4. It will not reproduce any of the Confidential Information without the Discloser's prior written consent.
 - 2.3.5. It will not copy, modify, create any derivative work of, or include in any of its products or publications the Confidential Information or any portion thereof.
 - 2.3.6. It will not reverse assemble, decompile, reverse engineer, analyze or otherwise attempt to identify the Confidential Information or derive the underlying ideas, algorithms, formulas, formulations,

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components, structure, methods, designs or organization) from the Confidential Information, or any part thereof.

2.3.7. It shall be responsible for any breach of this Agreement by its Representatives (including Representatives who hereafter become former Representatives), and shall take all steps as may be reasonably necessary to prevent unauthorized use or disclosure of the Confidential Information by its existing or former Representatives.

2.3.8. For purposes of this Agreement, the term "Representatives" shall mean the Recipient and its respective employees, consultants, attorneys or other agents and/or third parties that may gain access to the Confidential Information through the Recipient.

2.4. In the event Recipient is required to disclose any Confidential Information as a result of court order or other legal process, it shall be entitled to disclose such Confidential Information to the relevant legal authority provided that (i) it will provide Discloser with prompt prior notice of such requirement in order to provide Discloser an opportunity to take legal action to prevent or limit the scope of such disclosure; (ii) it shall limit disclosure to the required minimum.

2.5. The Recipient will not disclose or otherwise make available to the Discloser in any manner any confidential information received by it from third parties.

The obligations set forth in this section are perpetual, and shall survive termination of any Recipient's engagement with the Discloser, for any reason whatsoever.

3. Return of Materials.

Upon termination or expiration of this Agreement, or upon receipt of a request of the Discloser, the Recipient will promptly deliver to the Discloser all copies of all written and tangible material, in its possession or under its control, incorporating the Confidential Information, without retaining any copies thereof, except for one archival copy that may be retained by the Recipient's legal counsel to monitor compliance with the terms of this Agreement only.

4. No Licenses.

Nothing in this Agreement shall be construed as granting or conferring upon the Recipient any rights by license or otherwise, expressly, impliedly or otherwise for any product, service, invention, discovery or improvement arising out of the Confidential Information supplied by the Discloser pursuant to this Agreement.

5. Confidentiality Period

The rights and obligations of the parties under this Agreement shall continue in full force and effect for a period of seven (7) years following the date of the disclosure of the Confidential Information, provided that any trade secrets shall remain confidential until such are qualified under one of the exclusions set forth in Section 1.2 above.

6. Miscellaneous.

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- 6.1. Recipient acknowledges that the value of the Confidential Information provided by the Discloser is attributable substantially to the fact that the Confidential Information is maintained by the Discloser in confidence and is unavailable to others without the expenditure of substantial time, effort, or money. Recipient therefore covenants and agrees to keep strictly secret and confidence the Confidential Information in accordance with the provisions of this Agreement, and represents, warrants, and agrees that it will neither use nor permit to be used, directly or indirectly, such Confidential Information except as expressly specified in this Agreement, nor will Recipient use or permit use to be made of the Confidential Information by or for the benefit of any third party. Recipient agrees to safeguard the Confidential Information and to prevent disclosure or other dissemination thereof to any third party
- 6.2. Recipient acknowledges Discloser shall have no obligation to enter into any business engagement with the Recipient.
- 6.3. The Discloser may enforce this Agreement and any of its provisions by injunction, specific performance or other equitable relief, without placing a bond or proving actual damages and without prejudice to any other rights and remedies that the Discloser may have for the breach of this Agreement.
- 6.4. If any portion of this Agreement shall be adjudicated to be invalid or unenforceable, it shall be deemed to be amended to delete such portion.
- 6.5. This Agreement shall be enforced to the fullest extent permissible under the laws of the State of Israel, without regard to its conflict of law principles.
- 6.6. The Parties expressly consent to the exclusive personal jurisdiction of the competent courts in Tel-Aviv for any lawsuit arising from or relating to this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date written first above.

The Ramon Foundation	[_____]
By: _____	By: _____
Title: _____	Title: _____

ANNEX III

Ramon Scientific Committee Members

Mrs. Inbal Kreiss Chairperson	Head of Innovation Systems Missiles and Space Division Israel Aerospace Industries
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Mr. Avi Blasberger Committee Member	Director, Israel Space Agency Ministry of Science and Technology
Dr. Osnat Luxenburg Committee Member	Head of the Medical Technologies, Information and Research Division Ministry of Health
Mr. Tzachi Shenrach Committee Member	Head of the Technologies and Market Industries Division Deputy Director of Innovation Authority
Prof. Avishay Eyal Committee Member	Head of the Optics and Photonics Laboratory Program head of undergrad studies at the School of Electrical Engineering Faculty of Engineering, Tel Aviv University
Prof. Dan Blumberg Committee Member	Head of the Remote Sensing and Imaging Laboratory Vice President of Regional-Industrial Development Ben Gurion University
Prof. Dror Harats Committee Member	Faculty member in Sackler School of Medicine at Tel Aviv University Head of Research Authority at Sheba Medical Center CEO and founder of VBL Biotech Co.
Prof. Ehud Behar Committee Member	Dean of the Faculty of Physics, Astrophysicist Former Director of Asher Space Center Technion – Israel Institute of Technology
Dr. Jacob Cohen Committee Member	Chief Scientist NASA Ames Research Center Ramon Foundation advisor
Prof. Orit Shefi Committee Member	Head of Bio-Engineering Program Member at the Institute of Nanotechnologies and Neuro-Science Faculty of Engineering, Bar Ilan University
Dr. Shir Stibbe Committee Member	Donors Representative Pediatrics Resident Sheba Medical Center
Mr. Eliran Raphael Hamo Committee Coordinator	Researcher in the Department of Materials Science and Engineering Faculty of Engineering Tel Aviv University

ANNEX IV

Notional Cargo Pre-Position Opportunities (Flights) to the ISS

Mission	Launch Date	Schedule and comments
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SpaceX-23 (Cargo Dragon 2)	August 18, 2021	Regular soft-stow cargo is usually delivered to the ISS packing contractor ~45-60 days before launch Late load and powered cargo is usually delivered 1-7 days before launch
SNC-1 (Dream Chaser)	September 14, 2021	First launch of a new vehicle which will likely drive earlier than normal cargo delivery of 60-90 days for regular soft stow cargo. Late load and powered cargo is usually delivered 1-7 days before launch.
SpX-24 (Cargo Dragon 2)	November 2021	Regular soft-stow cargo is usually delivered to the ISS packing contractor ~45-60 days before launch Late load and powered cargo is usually delivered 1-7 days before launch.