ND NASA EPSCoR ISS CAN RFP
Issued: Oct. 27, 2021
Pre-Proposals due: ***Noon***, Nov. 17, 2021
Full Proposals due to ND NASA EPSCoR: Jan. 7, 2022
Full Proposals due to NASA: Jan. 14, 2022

ND NASA EPSCOR
INTERNATIONAL SPACE STATION (ISS) FLIGHT OPPORTUNITY
REQUEST FOR PRE-PROPOSALS (RFP)

Overview:
In response to the NASA Notice of Funding Opportunity (NOFO) EPSCoR ISS Flight Opportunity Announcement Number: NNH22ZHA003C, the North Dakota NASA EPSCoR (Established Program to Stimulate Competitive Research) is soliciting pre-proposals from faculty at affiliate institutions specifically designed to promote and expand NASA research in North Dakota. Following preliminary proposal selection by ND NASA EPSCoR, the selected pre-proposal team will work directly with the ND NASA EPSCoR office to submit a full proposal to NASA via NSPIRES.

The purpose of the ND NASA EPSCoR program is to promote, develop, and expand NASA research in North Dakota aligned with NASA priorities and Mission Directorates as outlined in the following sources:

- **NASA Priorities:**
  - NASA 2017 Strategic Technology Investment Plan
  - NASA 2018 Strategic Plan
  - NASA 2020 Technology Taxonomy

- **NASA Mission Directorates:**
  - Science Mission Directorate (SMD)
  - Aeronautics Research Mission Directorate (ARMD)
  - Space Technology Mission Directorate (STMD)
  - Human Exploration and Operations Mission Directorate (HEOMD)

Eligibility:
- Faculty PI must be from an ND NASA EPSCoR affiliate institution.
- Research must be in STEM (science, technology, engineering, or mathematics) and demonstrate alignment with NASA priorities and one or more NASA Mission Directorates.

Funding:
- Proposal budget requests may include funding for faculty salary and benefits, undergraduate and graduate student research assistantships, project relevant

supplies, minor research equipment (items that are less than $5,000 per unit), and faculty and student travel to NASA field centers for direct collaborations with NASA researchers and F & A (indirect cost). Equipment can be purchased as long as it is directly related to the project. Per the solicitation equipment that is used only for research, scientific, and technical activities directly related to the proposed research activities are allowed.

- Funds **cannot** be used for foreign travel, computers, furniture, filing cabinets, wall cabinets, office supplies, (including copy paper, pens, sticky notepads), telephone lines, lab renovations, building renovations, moving expenses, expenditures for teaching classes, honorarium fees, subscription fees, or membership fees.

Proposal Checklist:*

- Cover Sheet
  - Proposal Title
  - PI Contact Information
  - Funding Requested
  - Department Chair Signature
- CV of PI and Co-PIs
- Pre-proposal Narrative, Budget Estimate, and Budget Justification
- All files must be uploaded as **fully searchable pdf** documents.

Proposers are **strongly encouraged to combine all forms into one pdf document.*

This solicitation and budget form can be found online here:
http://blogs.und.edu/jdosas/2021/10/nd-nasa-epscor-iss-can-rfp-fall-21/

Proposal Guidance:
All proposals must be routed through the Department Chair, Dean's office, and Grants and Contracts/Sponsored Programs Administration (or equivalent office) for signatures. PIs must also complete proposal transmittal forms specific to their universities (if applicable).

One of the primary goals of NASA EPSCoR is to assist faculty in developing research initiatives that can be funded outside of the NASA EPSCoR program in the future. Therefore, proposers should specifically include a plan to develop and expand their proposal into an independently funded research group beyond the timeframe of this funding opportunity. An additional goal of ND NASA EPSCoR is to assist the

development of multiple NASA relevant research clusters in North Dakota. Proposals involving collaboration across departments, universities, and research groups/scientists in industry, are strongly encouraged. ***Proposals with collaborators at NASA centers are very strongly encouraged.***

*The following items/headers **must** be included in the pre-proposal narrative, in the order indicated.*

1. **CV of PI (and Co-PIs)**
   a. Relevant Research, Teaching, and Service Experience

2. **Research/Travel Narrative**

   *Pre-Proposals: Use the following headings in **≤ 3 pages** for a – h. Page limit does not apply to budget, references, and any letters of collaboration.*

   a. Introduction
      - Overview of the scope of work, including description of the NASA-relevance, nature of collaborations

   b. Background
      - Description of how the proposed work fits into your overall research plans and the field of study at large
      - Preliminary research results (if applicable)

   c. Research Objectives
      - Clear identification of all science and technical objectives
      - "S.M.A.R.T." Objectives strongly encouraged
        - SMART: Specific, Measurable, Achievable, Relevant, & Time-Bound.
        - Sample Guide to Defining SMART Goals

   d. NASA Relevance
      - Identification of current and potential applications/relevance to NASA
      - NASA mission directorate and NASA priority alignment

   e. Implementation Strategy
      - Expected deliverables: when, and by whom outlined in **timetable of milestone completion**

f. Management Plan
   - Hierarchy of individuals/institutions working on the project, details on collaborations, recruitment plan for team members not yet identified, methods for tracking and reporting progress throughout the project

g. Anticipated Outcomes
   - Expected research outcomes, plans for publications, conference attendance, funding opportunities, future studies and collaborations
   - Plan to secure future external funding

h. DEIA
   - Contribution of project to NASA's Diversity, Equity, Inclusion, and Accessibility (DEIA) Initiatives

i. Budget
   - Clear alignment between budget justification and budget table with items such as: faculty salary and fringe benefits, student stipends, research supplies and materials, travel for field research, collaborations, presentations, etc.

j. References
   - *Up to date* reference list indicative of innovative and active research

k. Letters of Commitment
   - Collaborator contact information
   - Specifically outlined roles and responsibilities in partnership

Proposal Evaluation:
Collaboration across institutions, industry, and NASA centers, and interdisciplinary teams are highly encouraged. Preference will be given to beginning, untenured faculty who have not yet received an ND NASA EPSCoR award. Proven track record of research capabilities in NASA relevant areas will be an advantage. Any and all proposals may be rejected.

It is a national priority to prioritize diversity, equity, inclusion, and accessibility (DEIA) in Science, Technology, Engineering, and Mathematics (STEM) fields. This DEIA consideration is included in each of the ND NASA EPSCoR goals, objectives, and priorities. All proposers are strongly encouraged to center DEIA efforts in their proposals. DEIA efforts include actions which positively impact and/or directly engage

underrepresented and underserved communities, such as women, people of color, LGBTQ+ persons, persons with disabilities, veterans, persons who live in rural areas, or persons adversely affected by persistent poverty or inequality.

Proposals will be evaluated using the following criteria: NASA relevance, ND relevance, scientific merit, evidence of collaboration, contributions to DEIA, potential for securing future funding, and budget reasonableness.

*Proposals **must** align with one or more NASA priorities:*

NASA priorities are outlined in the following resources:

- NASA 2017 Strategic Technology Investment Plan
- NASA 2018 Strategic Plan
- NASA 2020 Technology Taxonomy

*Additionally, proposals **must** align with at least one of NASA's Four Mission Directorates:*

NASA Mission Directorates (MD):
The **Science Mission Directorate (SMD)** expands the frontiers of Earth science, heliophysics, planetary science, and astrophysics. Using robotic observatories, explorer craft, ground-based instruments, and a peer-reviewed portfolio of sponsored research, SMD seeks knowledge about our solar system, the farthest reaches of space and time, and our changing Earth.

The **Aeronautics Research Mission Directorate (ARMD)** transforms aviation with research to dramatically reduce the environmental impact of flight, and improves aircraft and operations efficiency while maintaining safety in increasingly crowded skies. ARMD also generates innovative aviation concepts, tools, and technologies for development and maturation by the aviation community.

The **Space Technology Mission Directorate (STMD)** pursues transformational technologies that have high potential for offsetting future mission risk, reducing cost, and advancing existing capabilities. STMD uses merit- based competition to conduct research and technology development, demonstration, and infusion of these technologies into NASA's missions and American industry. This mission directorate is

being refocused as a new Exploration Research & Technology (ER&T) organization to support exploration as a primary customer.

The **Human Exploration and Operations Mission Directorate (HEOMD)** leads human exploration in and beyond low Earth orbit by developing new transportation systems and performing scientific research to enable sustained and affordable human life outside of Earth. HEOMD also manages space communication and navigation services for the Agency and its international partners.

Pre-Proposal Submission:
All pre-proposals must be routed through the proposer's home institution Grants and Contracts office for appropriate signatures, prior to submission to ND NASA EPSCoR (e.g. Sponsored Programs Administration, Division of Research & Economic Development, etc.). If the proposer's home institution does not have this office, procedures at their specific campus must be followed regarding grant proposal submissions.

All awards require: 1) an end-of-year award report to be filed with the ND NASA EPSCoR office within 30 days of the award end date, and 2) presentation of results at the ND NASA EPSCoR meeting.

All pre-proposals must be submitted via the online submission form no later than:

Noon on Nov. 17, 2021

Please note, this online submission form does allow proposers to save progress, navigate between pages, and continue entering information at a later date. However, it is recommended that proposers do not complete the form until they are ready to submit. Information requested in the form includes: contact information for the PI, Co-PI, and respective departments (Chairs and Administrative Assistants included), information on any previous NASA EPSCoR awards received by the PI or Co-PI in last five years, contact information for any NASA or industry collaborators, and uploads of the requested documents as a single pdf. (Uploading as multiple pdfs is acceptable, yet documents combined into one pdf is strongly preferred.)

Down-select Process:
Pre-proposals will be evaluated in a down-select. A maximum of one full proposal may move forward for consideration by NASA. The successful pre-proposal team will

be notified approximately one week after submission of the pre-proposal. The successful pre-proposal team is required to submit the full proposal to the ND NASA EPSCoR team no later than Jan. 7, 2022. The full proposal is due to NASA via NSPIRES no later than Jan. 14, 2022, and will be submitted by the ND NASA EPSCoR Director.

Online Proposal Submission Form:
https://und.qualtrics.com/jfe/form/SV_eVCQeQU5ZuoX6dM

or

https://tinyurl.com/NDNASAEPSCoR-ISS-CAN-F21

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General questions regarding the RFP may be directed to the ND NASA EPSCoR Director, Caitlin Milera, milera@space.edu.

Finance questions regarding the RFP may be directed to UND Aerospace Accountant, Laurie Baumgartner, laurie.baumgartner@und.edu.