UNIVERSITY OF WASHINGTON
Seattle, Washington

To:	Office of STEM Engagement National Aeronautics and Space Administration Washington, D.C. 20546
Title of Project:	Washington NASA Space Grant Consortium Award Number: 80NSSC20M0104 Augmentation to Announcement Number: NNH19ZHA001C
Amount Requested:	$27,500 annual
Cost Share:	
Principal Investigator:	Kristi A. Morgansen Chair William E. Boeing Department of Aeronautics & Astronautics University of Washington, Box 352400 Seattle, WA 98195-2400 email: morgansn@uw.edu
University office to be contacted regarding negotiation of award:	Office of Sponsored Programs 4333 Brooklyn Ave NE, Box 359472 Seattle, Washington 98195-9472 Tel: (206) 543-4043; Fax: (206) 685-1732 Email: osp@uw.ed

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Date Kristi A. Morgansen, Interim PI

Statement of Work.
The purpose of our NIF program is to prepare a diverse new generation of scientists and engineers for work at NASA and related organizations. Our research internships provide initial funding to attract and retain students to STEM. All awards are made through competitive processes. Selection is conducted by faculty committees and based on academic excellence and commitment to NASA-related STEM disciplines. Supported STEM disciplines for undergraduates and graduate students represent a broad range of NASA interests.

NASA Internships and Fellowships

The purpose of WSGC's NIF programs is to increase the number of people in Washington doing research in NASA-related fields and to create resources to aid NASA-related research efforts at our member institutions. This type of experience has been very successful with 93% of WSGC awardees from 2006 through 2017 being retained in STEM through their next step. Funding criteria include direct ties to NASA research interests and workforce development needs, potential to enhance the career of the faculty member or student, and improvement in an institution's overall ability to perform research in NASA-related fields. Our effort is this area is generally oversubscribed, but we are seeing an overall decrease in student engagement for career related activities diminish due to remote learning resulting from COVID restrictions. The augmentation will be used to provide additional remote or hybrid research fellowships to support undergraduates in NASA-related research.

Specific areas of supported internship research at the four participating units (UW, WWU, CWU, and WU) will include but not be limited to:

- Biology and astrobiology: Understanding life on Earth and in space (SMD: Ames, JPL);
- Exoplanets: Finding worlds beyond our own (SMD: Ames, JPL);
- Autonomy and robotics: Complementing humans in space (HEOMD: Ames);
- Lunar science: Rediscovering our moon (SMD: Ames, JPL);
- Planetary atmospheres and geology: Solar system characteristics and origin of life (SMD:
- Ames, JPL);
- Primitive solar systems bodies: Lunar science; Preparing for returned sample
- Investigations (SMD: Ames, JPL);
- Atmospheric composition and dynamics: Land and solid earth processes; water and
- carbon cycles and climate science (SMD: JPL, MSFC);
- Astronomy: Origin, evolution, and structure of the universe; gravitational astrophysics
- (SMD: JPL);
- Extra-solar planets and star and planetary formation (JPL);
- Solar and space physics and spacecraft charging (SMD: MSFC, JPL, GSFC);
- In-space propulsion (STMD: GRC)

The base program will to support continue to support 40 research undergraduates and with augmentation we will add 7 additional opportunities that will be awarded at UW, WWU, CWU, and WSU, with potential to include other WSGC Affiliates if faculty mentors can be identified at their institution.

SMART Goal: To increase offered internships at four WSGC institutions (UW, CSU, WWU, and WU) that are competitively awarded.
SMART Objective: Provide immersive experiences for undergraduate students in technologies relevant to NASA projects.
SMART Metric: Award WSGC research internships to underrepresented minority students at or above 20% and to women undergraduates at or above 50%.
SMART Target Number: Three full-time research internships and four part-time research internships.
SMART Timeline: Applications will be open in March and offered by end of May. Students will participate in research programs summer 2021. Results from internships and fellowships will be presented at a consortium wide poster session/reception at the start of each academic year (Sept/Oct).

These efforts fulfill Space Grant Objective 2: solving Mission Directorate challenges, SG Objective 3: state-wide network of organizations, SG Objective 4: cooperative programs amongst universities, aerospace industry, and NASA, SG Objective 5: encouraging interdisciplinary programs that support research and development for NASA STEM, SG Objective 6: a diverse workforce, and SG Objective 7: innovative program advancing aerospace knowledge.

Budget Justification.

Because this funding shall be used for NIFs, F&A (indirect) costs cannot be applied to this funding category.

In order to encourage participation from faculty mentors, WSGC will provide the full stipend amount for these 7 additional research internships. Many underrepresented students and low-income students are not able to participate in unpaid opportunities, making a stipend crucial to including them in this type of workforce development opportunity. Each full-time student will be provided a stipend of $5,500 and each part-time student will be provided a stipend of $2750. The funds from this augmentation will directly support student participation.

Augmentation Budget Table Samples

Add cells as needed

	2nd Augmentation Budget: Year 2 FY 2021 – 2022		
	NASA Funds	**Cost-Share**	**Total Funding**
A. Personnel/ Direct Labor			
1. Principal Investigator/ Director			
2. Program Manager			
3. Research Associate			
4. Staff Support			
Total Salaries			
B. Fringe Benefits			
1. Principal Investigator/ Director			
2. Program Manager			
3. Research Associate			
4. Staff Support			
Total Fringe			
C. Equipment			
D. Materials and Supplies			
E. Services			
F. Domestic Travel			
G. NASA Internships and Fellowships			
1. Internships	$27,500		$27,500
2. Fellowships			
Total NASA Internships and Fellowships			
H. Aeronautics Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Aeronautics Mission Directorate Projects			

I. Human Exploration Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Human Exploration Mission Directorate Projects			
J. Science Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Science Mission Directorate Projects			
K. Space Technology Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Space Technology Mission Directorate Projects			
L. Competitive Projects			
1. Project 1			
2. Project 2			
Total Competitive Projects			
Total Direct Project Costs (A-L)			
M. Subcontracts			
N. Total Direct Costs	$27,500		$27,500
O. Indirect Cost (% rate of item O)			
P. Total Costs	$27,500		$27,500

	2nd Augmentation Budget: Year 3 FY 2022 – 2023		
	NASA Funds	**Cost-Share**	**Total Funding**
A. Personnel/ Direct Labor			
1. Principal Investigator/ Director			
2. Program Manager			
3. Research Associate			
4. Staff Support			
Total Salaries			
B. Fringe Benefits			
1. Principal Investigator/ Director			
2. Program Manager			
3. Research Associate			
4. Staff Support			
Total Fringe			
C. Equipment			
D. Materials and Supplies			
E. Services			
F. Domestic Travel			
G. NASA Internships and Fellowships			
1. Internships	$27,500		$27,500
2. Fellowships			
Total NASA Internships and Fellowships			
H. Aeronautics Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Aeronautics Mission Directorate Projects			

I. Human Exploration Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Human Exploration Mission Directorate Projects			
J. Science Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Science Mission Directorate Projects			
K. Space Technology Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Space Technology Mission Directorate Projects			
L. Competitive Projects			
1. Project 1			
2. Project 2			
Total Competitive Projects			
Total Direct Project Costs (A-L)			
M. Subcontracts			
N. Total Direct Costs	$27,500		$27,500
O. Indirect Cost (% rate of item O)			
P. Total Costs	$27,500		$27,500

	2nd Augmentation Budget: Year 4 FY 2023 – 2024		
	NASA Funds	**Cost-Share**	**Total Funding**
A. Personnel/ Direct Labor			
1. Principal Investigator/ Director			
2. Program Manager			
3. Research Associate			
4. Staff Support			
Total Salaries			
B. Fringe Benefits			
1. Principal Investigator/ Director			
2. Program Manager			
3. Research Associate			
4. Staff Support			
Total Fringe			
C. Equipment			
D. Materials and Supplies			
E. Services			
F. Domestic Travel			
G. NASA Internships and Fellowships			
1. Internships			
2. Fellowships			
Total NASA Internships and Fellowships			
H. Aeronautics Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Aeronautics Mission Directorate Projects			

I. Human Exploration Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Human Exploration Mission Directorate Projects			
J. Science Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Science Mission Directorate Projects			
K. Space Technology Mission Directorate Projects			
1. Project 1			
2. Project 2			
Total Space Technology Mission Directorate Projects			
L. Competitive Projects			
1. Project 1			
2. Project 2			
Total Competitive Projects			
Total Direct Project Costs (A-L)			
M. Subcontracts			
N. Total Direct Costs	$27,500		$27,500
O. Indirect Cost (% rate of item O)			
P. Total Costs	$27,500		$27,500