National Aeronautics and Space Administration

NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM

STEM INSPIRE - ENGAGE - EDUCATE - EMPLOY

The Next Generation of Explorers

Spring 2020 National Space Grant Directors' Meeting

Arlington, VA

Chad Rowe, Erica Alston and Team

February 28, 2020

FOOD FOR THOUGHT

TOPICS

- Status of Base and Augmentation Awards
- Artemis Student Challenge Solicitation Update
- BIG Idea Challenge
- FY2021 Plans for Funding under CR
- Multi-Year Augmentation (Years 2-4)
- Evaluation Solicitation
- Reporting
- USIP
- NIF Update

Introductions

OSTEM Program Office

- Chad Rowe– Acting Program Manager
- Dr. Erica Alston – Deputy Program Manager
- Andrew Hubbard – Resource Analyst
- Mike Cherry – Senior Program Analyst
- Dr. Sonya Greene – Senior Program Analyst
- Dr. Frank McDonald – Senior Program Analyst

NASA Center Specialists - POCs

- ARC/AFRC – Tameka Williams
- GSFC – James Harrington
- GRC – Mark D. Kankam
- JPL – Linda Rodgers
- JSC – Misti Moore
- KSC – Theresa Martinez
- LaRC – Clarence Bostic (Technical Officer)
- MSFC – Frank Six
- SSC – Mitch Krell (Technical Officer)

Farwell & Welcome

Departing Space Grant Specialists

Dave Berger – AFRC

Gina Blystone – LaRC

New Space Grant Specialists

Tameka Williams – ARC/AFRC

Clarence Bostic – LaRC

Julie Clift – MSFC

TOPICS

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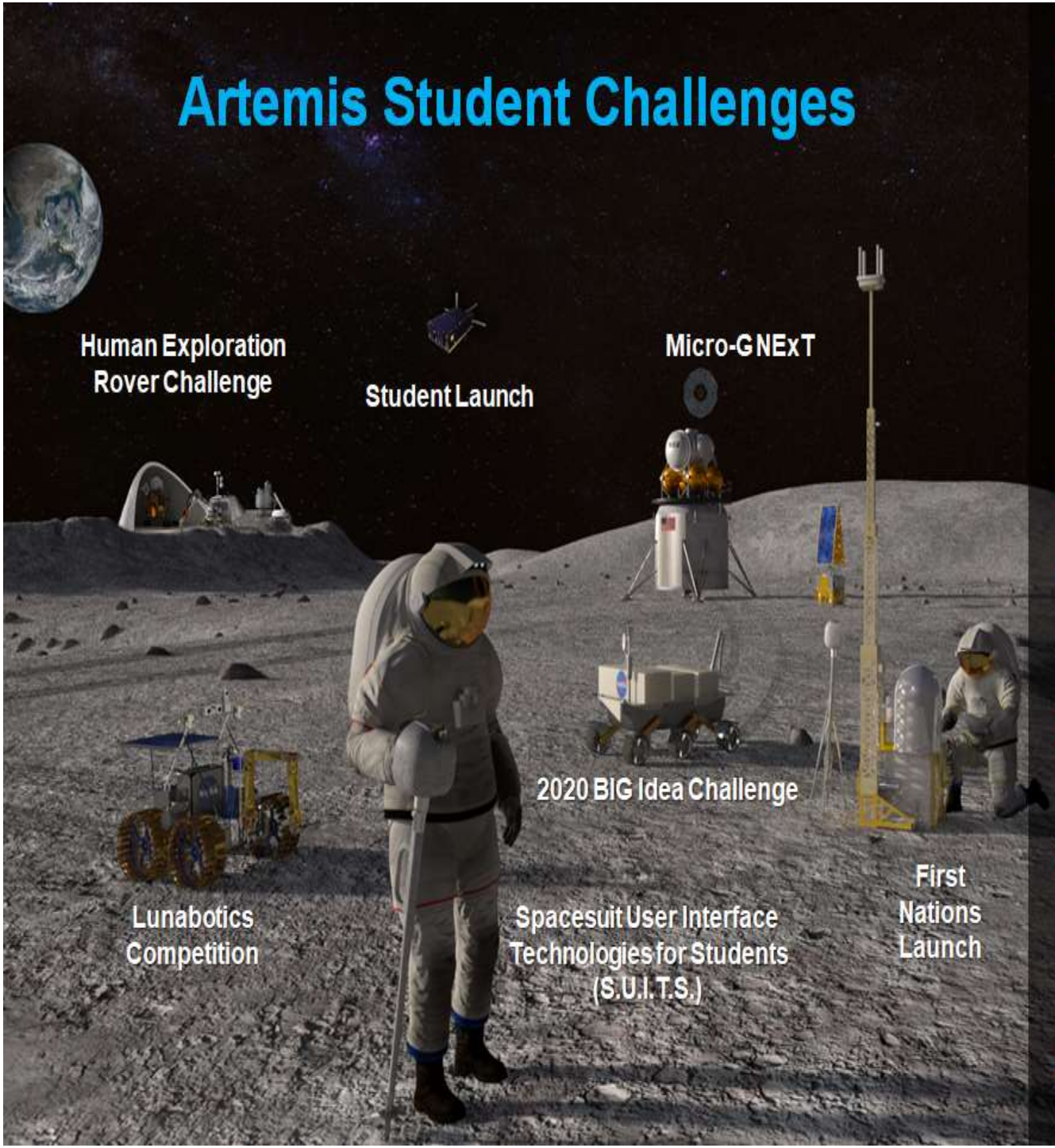
- **Reporting**
- **USIP**
- **NIF Update**

Please submit questions to: arc.cnf.io
Don't forget to vote responses up!

Artemis Student Challenges



Human Exploration Rover Challenge
Create a vehicle designed to traverse the simulated surface of another world

Micro-g NExT
Design, build and test a tool or device to address a current space exploration challenge

Spacesuit User Interface Technologies for Students
Design and create spacesuit information displays within an augmented reality environment

First Nations Launch
Build and launch class K high-powered rockets

Big Idea Challenge
Design lunar payloads that demonstrate technology systems needed for exploration and science

Student Launch
Research and compete and experience exploration to support the Space Launch System

Lunabotics
Build a robot to simulate an off-world lunar mining mission

ARTEMIS

stem.nasa.gov/joinartemis

ARTEMIS STUDENT CHALLENGES – SINCE THE MEGA-PI IN AUGUST 2019

- Completed Activities
  - Established cross-cutting collaborations spanning OSTEM, STMD, and HEOMD
  - Released the solicitation for Space Grant Consortia members to propose grant activities in alignment with Agency-wide Artemis program goals
    - Solicitation informed by 28 quality Request For Information responses received last August
    - Proposal Review Actively Underway – Selection Announcements Expected by mid-March
    - Funded award activities begin in May
  - Developed stem.nasa.gov/artemis website

ARTEMIS STUDENT CHALLENGES – SINCE THE MEGA-PI IN AUGUST 2019

- Near-term Focus Areas
  - Evolve the student challenge portfolio
    - Leverage NASA's Artemis program visibility and momentum
    - Partner with the Space Grant Consortia, and your vast existing network of affiliates and partners
    - Ensure Artemis-relevant foundational learning and high-quality, authentic experiences for each challenge participants
  - Broaden national strategic partnerships spanning industry, public service corporations, non-profit organizations, etc.
  - Identify and implement additional competitive solicitations for the Space Grant Consortia, in partnership with NASA's Mission Directorates

ARTEMIS STUDENT CHALLENGES – SINCE THE MEGA-PI IN AUGUST 2019

- Future Space Grant competitive solicitation concepts are at various stages of development between OSTEM and the Mission Directorates. *Examples:*
  - Evolve BIG Idea Challenge 2020 cost-share construct to additional activities
  - Capitalize on the success of the recent Aeronautics Webinars (ARMD/K. Rugg and VASGC/M. Sandy) with additional webinar opportunities
  - Eclipse 2024
  - Collaborate with the International Space Station Program to identify higher education student projects and activities
  - Partner with Artemis Programs to advance objectives related to overall needs related to transportation, logistics, research, technology development, outreach, etc., etc., etc.

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BIG IDEA CHALLENGE

The Game Changing Development program from NASA's Space Technology Mission Directorate partnered with the Office of STEM Engagement to fund unique concepts that address near-term capability requirements to support exploration of permanently shadowed regions in-and-near the Moon's Polar Regions.

More opportunities for high-fidelity concept development, and student participation in NASA's missions by leveraging the vast network of the Space Grant Consortia spanning every state, Puerto Rico, and the District of Columbia.

THE 2020 BIG IDEA CHALLENGE FINALISTS ARE:

- **Arizona State University in Tempe** ($84,333)
- **Colorado School of Mines in Golden with the University of Arizo in Tucson** ($114,000)
- **Dartmouth College in Hanover, New Hampshire** ($83,000)
- **Massachusetts Institute of Technology in Boston** ($163,900)
- **Michigan Technological University in Houghton** ($161,074)
- **Northeastern University in Boston** ($90,889)
- **Pennsylvania State University in State College** ($145,933)
- **University of Virginia in Charlottesville** ($123,596)

MISSION DIRECTORATE SUCCESSES

Over $1M investment from STMD and OSTEM

Artemis Student Challenges represent a 50-50 cost share between HEOMD and OSTEM with up to $2M in awards

VASGC lead pilot to bring Consortia together with NASA Aeronautics experts that touched the entire Nation

Continued collaboration with NASA's OGC that focuses on Space Law with interns at 3 NASA Centers in Summer 2020

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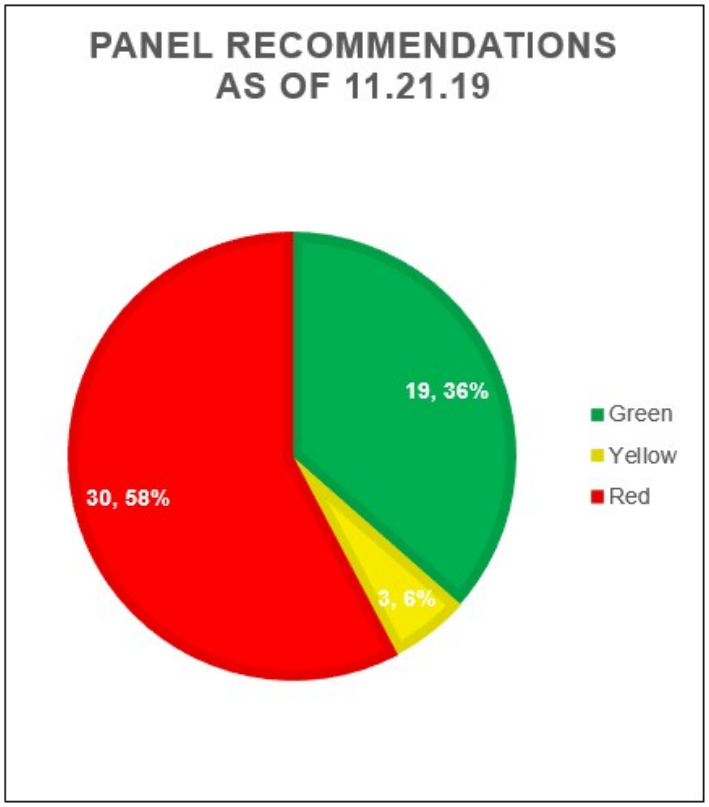
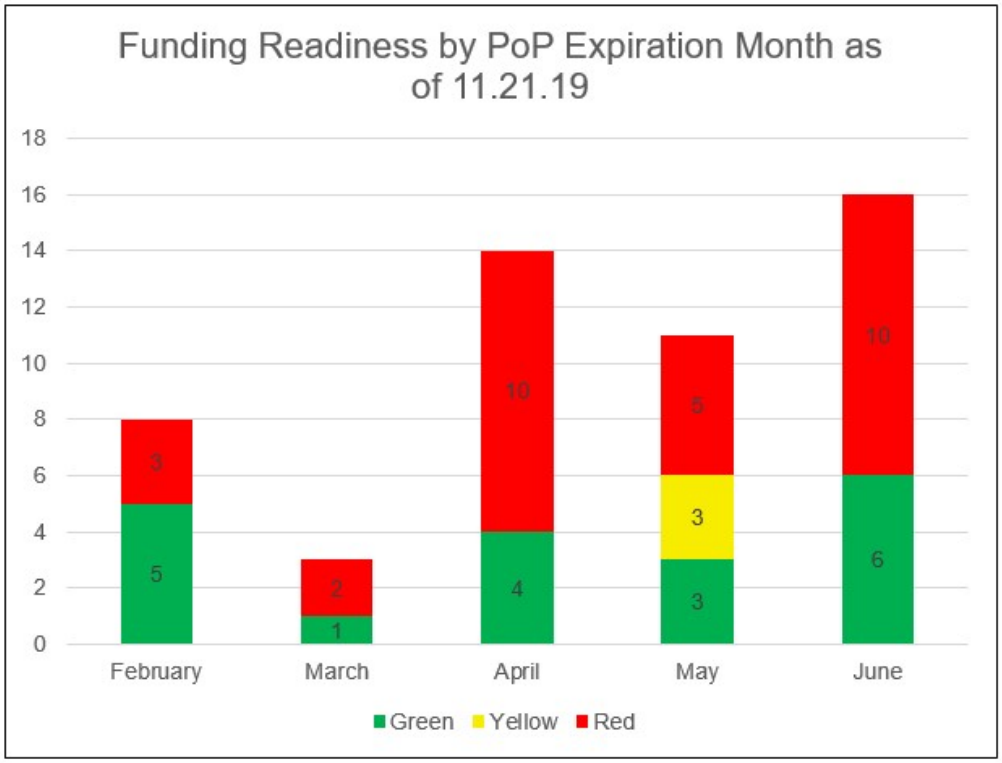
Base Awards Status





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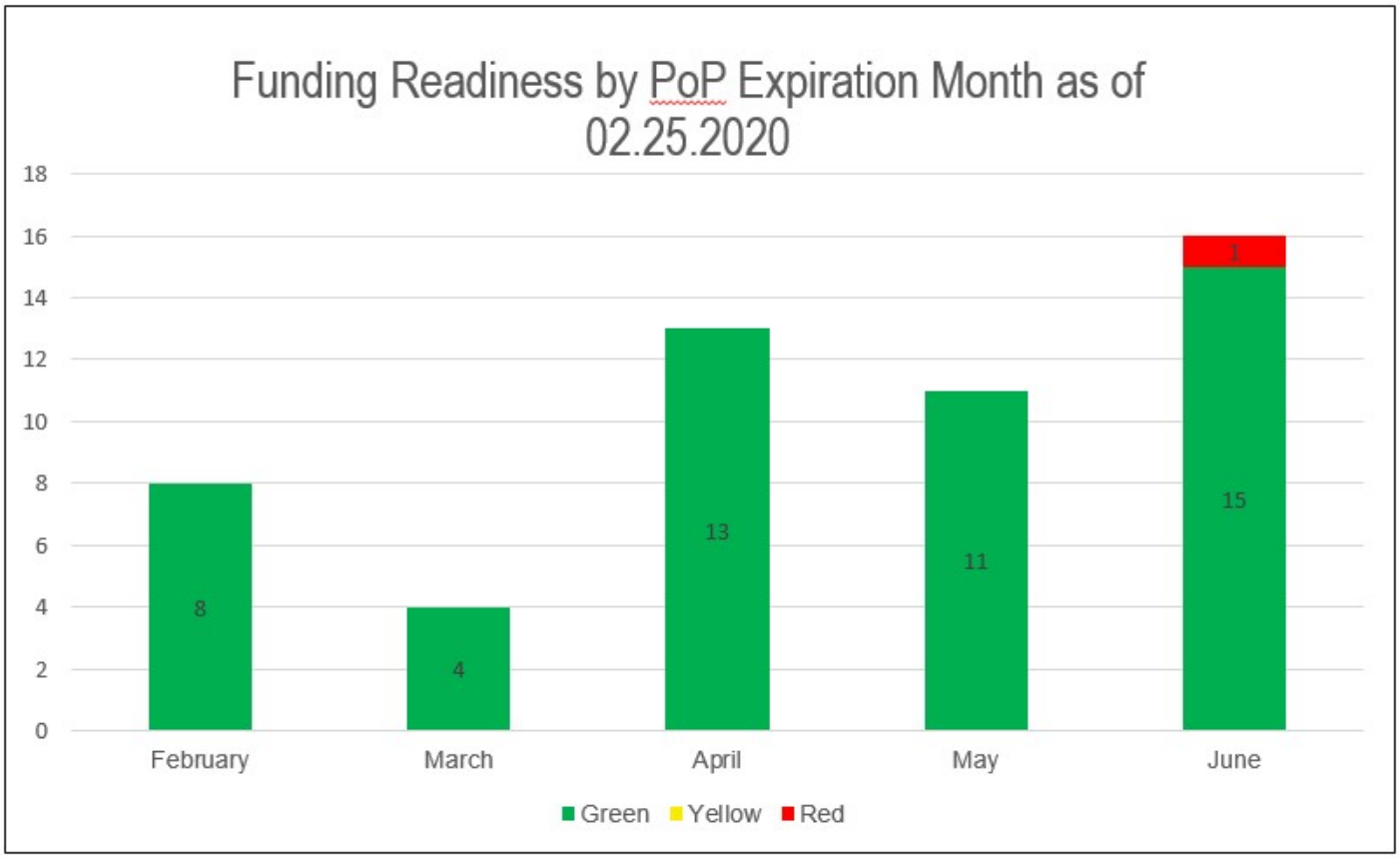
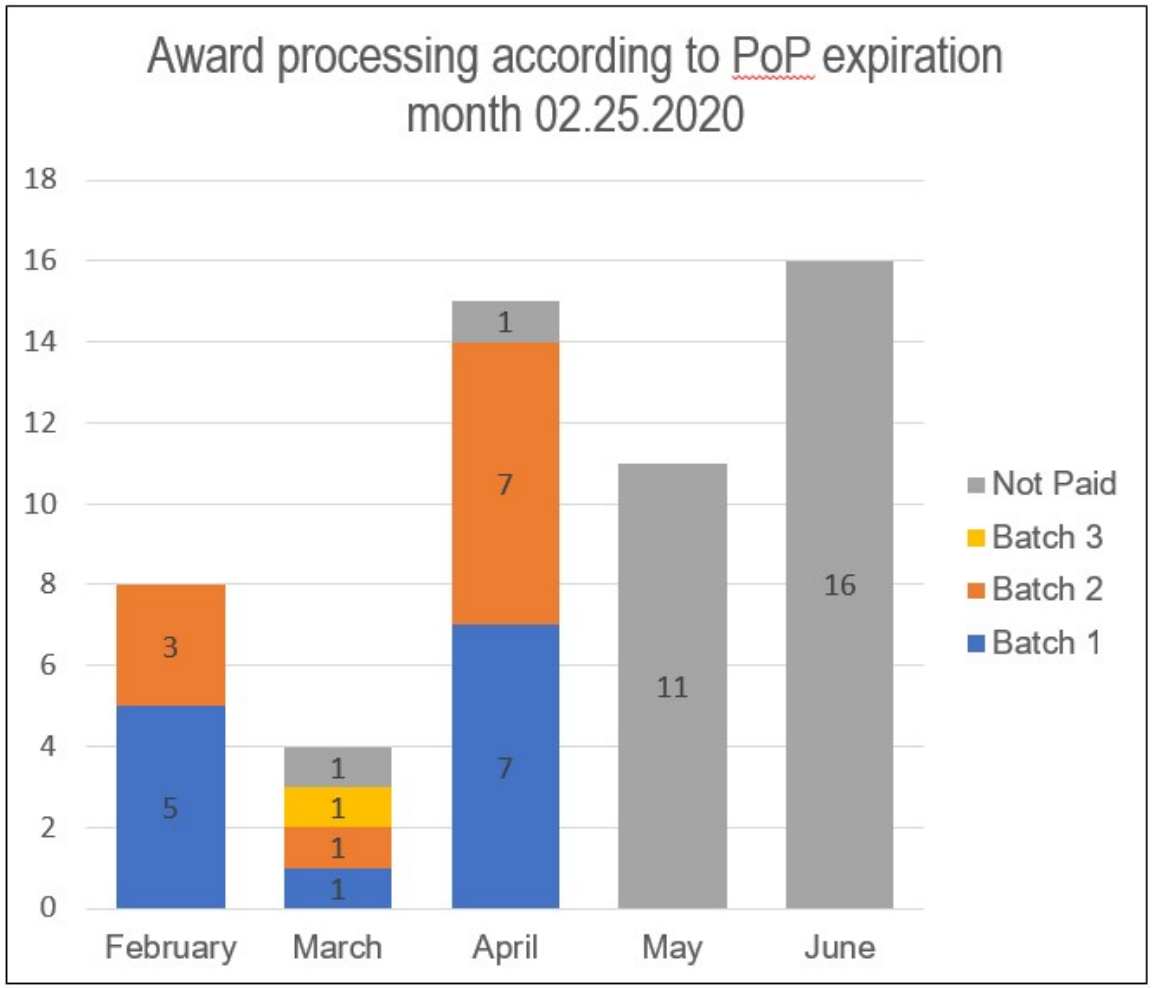
Base Awards Status



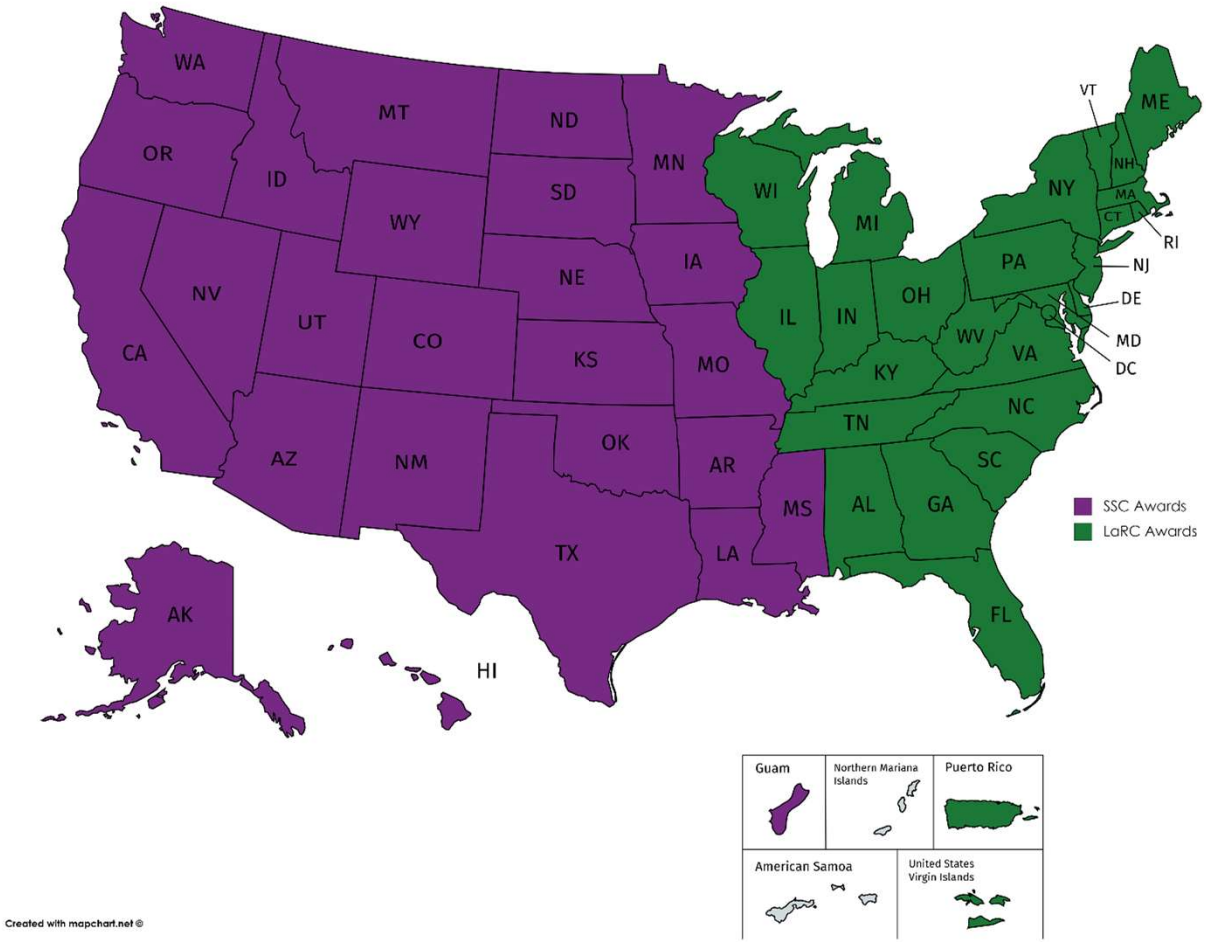
51 base award proposals have been approved for funding

Base Awards Status



- 25 awards have been sent to the NSSC for processing in Batches 1-3
- 4 have been awarded
- 7 will be awarded within the next 2 weeks
- The remaining 14 awards have budgetary concerns that have to be addressed before the award processed can be completed

Awards by Center



- Roughly all states west of the Mississippi River (25) will be serviced by SSC (Krell) for this award cycle
- Remaining states (27) will be serviced by LaRC (Bostic)

Augmentation Status

Year 1 Augmentation Status:

- Currently in Review Phase
- The awards that are due in May and June will receive their base and augmentation awards at the same time for a maximum total of $760,000
- The 25 awards that were already processed will be made whole once the augmentations approved and the remaining funding balances will be sent to the NSSC for award augmentations in late April

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FY2021 Plans for Funding under CR

- While under a continuing resolution (CR), the Space Grant Program Office will fund multi-year awards using the following criteria:
  - Receive approval for the next increment of funding by on-time submission of the annual performance report 60 days before award anniversary date using the required template(s
  - Prioritization by anniversary date = February awards will receive funding before May awards
  - All awards will be partially funded at approximately ½ of the award value
- Depending on length of CR, all awards be partially funded until either the passage of a budget by Congress or sufficient CR funding is received to make all awards whole

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Multi-Year Augmentation

- OSTEM will be moving forward with a multi-year augmentation to bring all Consortia to the $760,000 funding level
- The feasibility of this will be determined on future funding levels from Congress
- If approved, the augmentation will be released late Q4 2020
- As always, OSTEM's ability to make awards is dependent on availability of funds

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Space Grant Program-Level Evaluation Opportunity

Goal:

NASA's OSTEM seeks innovative proposals to conduct an independent program-level, two-year impact evaluation pilot of multiple states in the Space Grant Program, which may ultimately be scaled for future evaluation of the entire Space Grant Program (*based upon the findings and recommendations of the pilot studies*).

The purpose of this independent program-level impact evaluation is to characterize the Space Grant Program's impact and assess:

- How and to what extent the Space Grant Program is designed and executed in alignment with federal law and NASA's STEM engagement goals and priorities; and
- The degree to which the Space Grant Program is achieving its intended outputs and outcomes on a national level.

NOTE: These efforts will provide Space Grant Program Management with robust evidence that can be used to drive future scaled evaluation strategy, program policy, data collection plans, and appropriated competitive awards.

Draft Solicitation Summary

Amount of award	$500,000 total
Expected number of awards	2
Start date	September 1, 2020
Duration of award	Phase 1: September 2020 – August 2022 Phase 2: September 2022 – August 2024
Award type	CAN
Solicitation release	March 31, 2020
Notice of Intent (NOI)	May 1, 2020
Proposal due date	May 31, 2020
Anticipated award date	August 2020
Expected proposers	Current Space Grant Consortia Lead Institutions

Draft Solicitation Feedback Reminder

Please provide any general feedback/comments and/or questions about the DRAFT Space Grant Program-Level Evaluation Solicitation document using the URL below **no later than March 6, 2020**.

Feedback URL: https://tinyurl.com/SG-solicitation-feedback

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Reporting

- **APD Information**:
  - Email sent on 12/20/2020 by Dr. Sonya Greene that outlines APD process for FY2019
  - Email has APD template
- **Request for NCEs:**
  - Email sent on 1/8/2020 that outlined procedure for requesting NCEs
  - APD must be submitted with/before NCE request
  - A summary of remaining milestones, costs and schedule for execution of milestones MUST be submitted to hq-space-grant@mail.nasa.gov only then will the NCE request be concurred by the technical officer
- **Closeout Reporting:**
  - For awards **not requesting** an NCE: the 5th-year APD will serve as your close-out report. Due 90 days after award expiration date.
  - For awards **requesting** an NCE: the 5th-year APD is due 60 days before the award anniversary date. Your APD for the NCE year will serve as your close-out report and is due 90 days after the expiration of your NCE. The closeout report should be the revised 5th-year APD updated with all activities that occur during the NCE period.

Reporting cont.

- **OEPM**:
  - FY2019 OEPM reporting closed: February 3, 2020
  - Validation/Verification currently taking place
  - 51 out of 52 Consortia have submitted their data
  - **OEPM is open for FY2020 data reporting**
  - Due date for FY2020 reporting: January 31, 2021
  - OEPM 2.0 Launch Date: TBD
  - New Space Grant members who need OEPM access should contact: Mike Cherry; Michael.R.Cherry@nasa.gov
- **FY2019 White House Report:**
  - The Program Office will send out the data call next week.
  - States/Territories with qualified Minority Serving Institutions will be contacted by Mike Cherry.
  - Please respond by March 27, 2020.

Reporting cont.

Categories (choose one)	
(1) Research and Development	**Research and Development (R&D):** Studies, observations, and other activities concerned with the identification, description, experimental investigation, and theoretical explanation of social, physical, and behavioral phenomena. Implementation activities are also included in R&D.
(2) Program Evaluation	**Program Evaluation:** Actions to assess the effectiveness of institutional programs and activities, as well as the effectiveness of federal programs and activities. In many cases, program evaluation activities are conducted on a continuous basis and are frequently included as salaries or other budgetary expenses.
(3) Training	**Training:** Using professional personnel (federal and nonfederal) to acquire or enhance knowledge or skills at an institution of higher education.
(4) Facilities and Equipment	**Facilities and Equipment:** Structures, works, fixed equipment, major repairs, or alterations to: structures, works, fixed equipment, facilities, or land for use by an institution of higher education.
(5) Internships, Traineeships, Recruitment, and Arrangements under the Intergovernmental Personnel Act (IPAs)	**Internships, Traineeships, Recruitment, and Arrangements under the Intergovernmental Personnel Act (IPAs):** Cooperative education, student and faculty internships, visiting professorships, and personnel and student recruitment at institutions of higher education.
(6) Student Tuition Assistance, Scholarships, Fellowships, and Other Aid	**Student Tuition Assistance, Scholarships, Fellowships and Other Aid:** Federal funds awarded to an institution of higher education for students or awarded directly to students for payment of such charges as tuition and room and board.
(7) Direct Institutional Subsidies	**Direct Institutional Subsidies:** Federal financial support to institutions of higher education for education and general expenses where the federal government either places no restrictions on the uses to which the funds may be put or where the federal government provides a broad range of allowable activities within which the institution has discretion to use the funds.
(8) Third-Party Awards	**Third-Party Awards:** Organizations or entities that receive federal funds on behalf of historically black colleges or universities or tribal colleges and universities. Examples of such entities include the National Association for Equal Opportunity in Higher Education (NAFEO); American Indian Higher Education Consortium (AIHEC); Thurgood Marshall College Fund/ United Negro College Fund (UNCF); National Laboratories, such as Los Alamos or Lawrence Livermore; and other foundations and associations.
(9) Private-Sector Involvement	**No Definition Provided**
(10) Administrative Infrastructure	**Administrative Infrastructure:** The management and administrative framework of an institution of higher education.
(11) Economic Development	**Economic Development:** Awards provided to support creation of new businesses or jobs, or expand existing businesses in order to create new markets.
(12) Other Activities	**No Definition Provided**

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39 OSTEM USIP Projects

Status	CubeSat	Suborbital	Total
Launched: (59%)	8	15	**23**
Expected to launch before Sept. 2020: (21%)	2	6	**8**
Expected to launch after Sept. 2020: (15%)	6	0	**6**
Not expected to launch for technical reasons: (5%)	0	2	**2**

39 OSTEM USIP Projects

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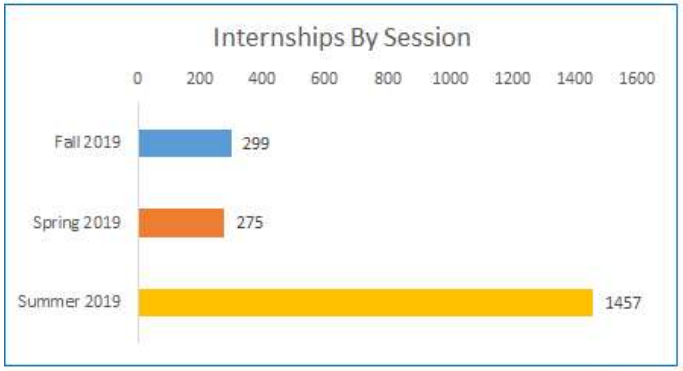
Meet the Internship Program Team

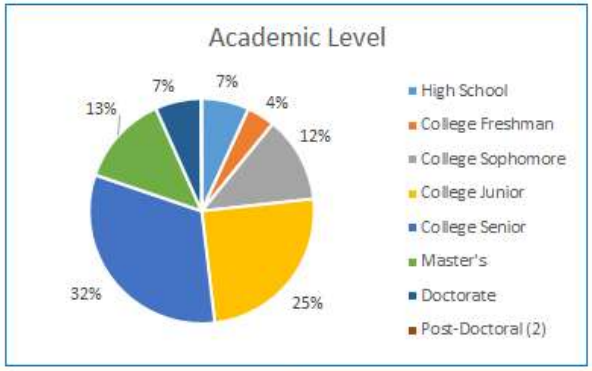
- Lynnette Madison – Functional Manager
- Raquel Marshall – East Regional Lead
  - KSC, LaRC, GSFC, WFF, GISS, IVV, GRC
- Veronica Clauson – West Regional Lead
  - JSC, MSFC/SSC, AFRC/ARC, JPL

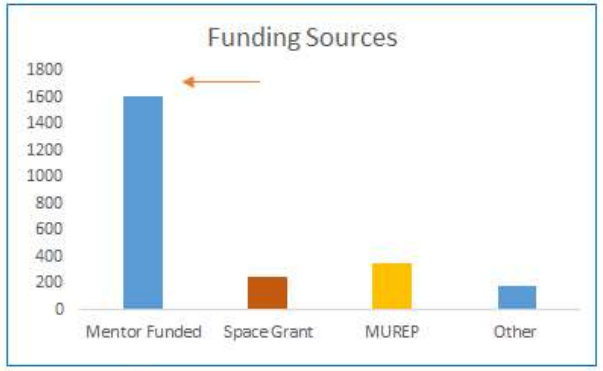
NASA Office of STEM Engagement Internship Program

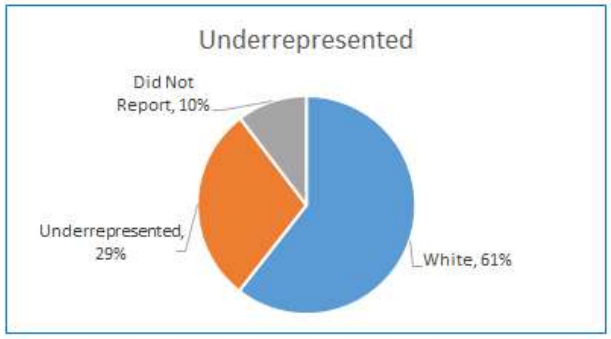
Calendar Year 2019

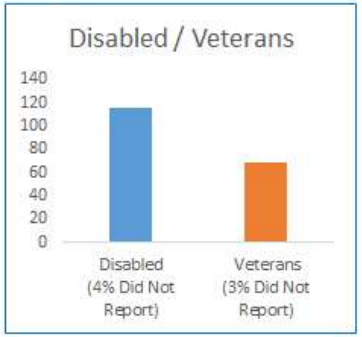
Total Interns: 2031	One Session Interns: 1811	Multi-Session Interns: 220

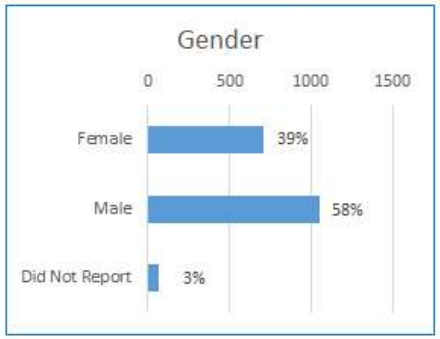


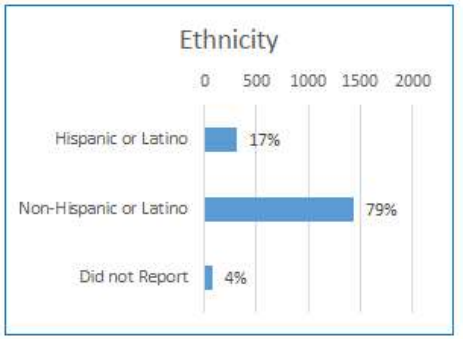












Top 4 states students where interns are selected (based on school): California, Maryland, Texas, and Virginia

36% Have Participated in Other NASA Programs

Data based on Einstein Analytics

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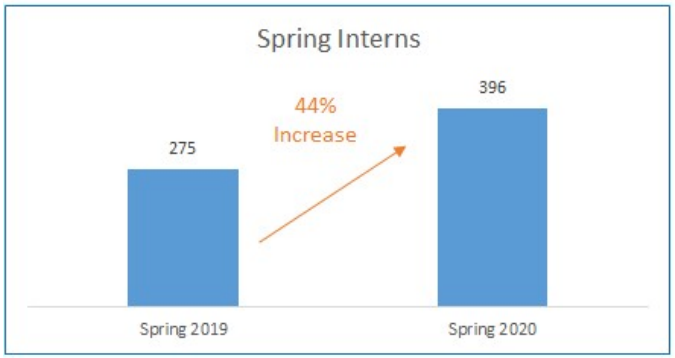
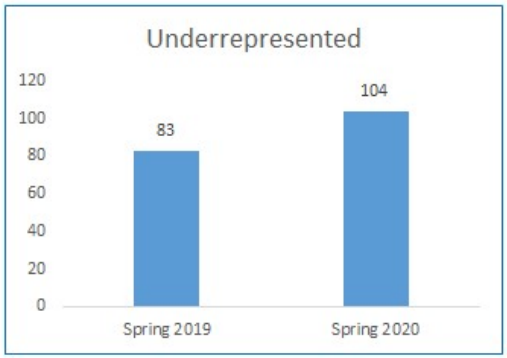
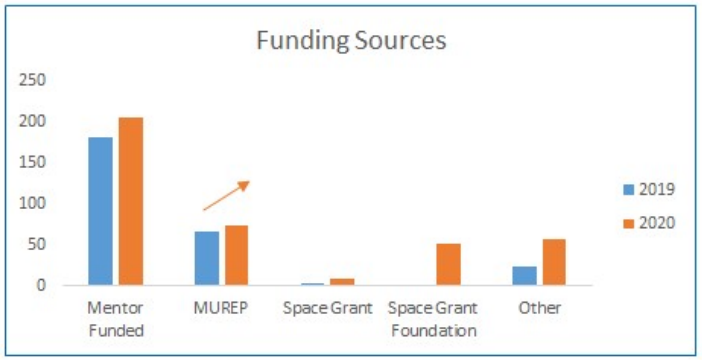
NASA Office of STEM Engagement Internship Program

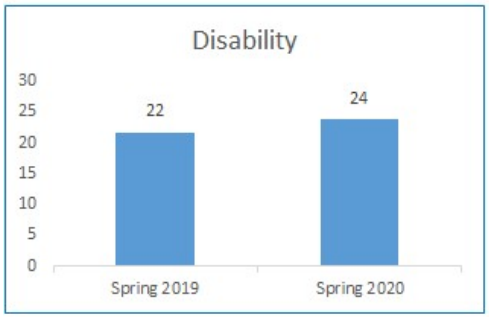
Spring Comparison By Year

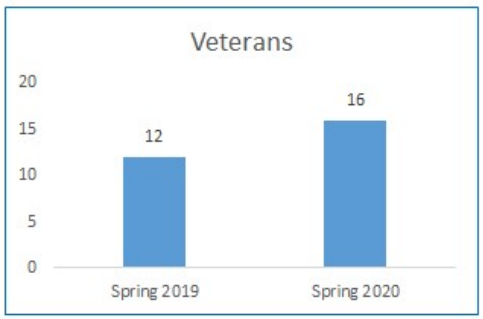
Total Spring 2020 Interns: 396

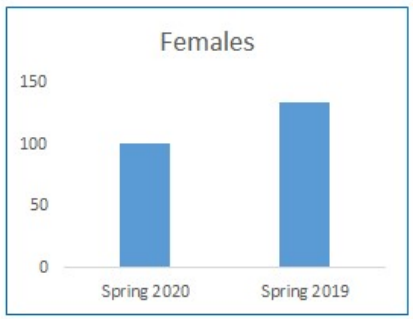


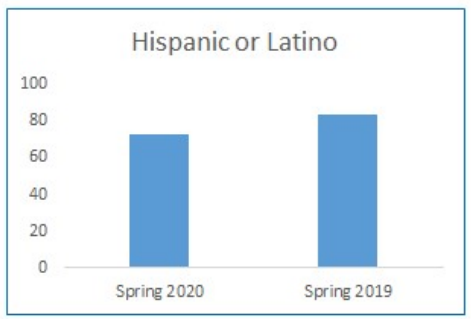












Internship Coordinator efforts led to an increase in every area!

Underrepresented = All females and all males (excluding Caucasian and Asian males).

Data based on Einstein Analytics

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How Can We Help Facilitate Space Grant Sponsorships?

Problem: Space Grants want to sponsor students in three different ways. The current process is communicating sponsorships via email and that data was input into spreadsheets and disseminated to Coordinators.

Space Grants also had no way to see the big picture of their sponsorships and the representation across the Center.

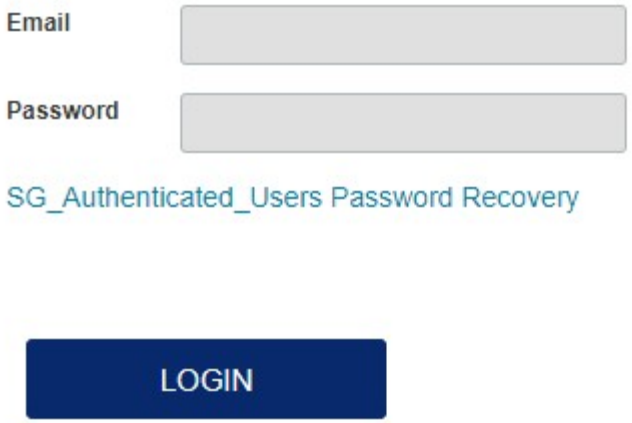
Solution: USRA created a web-based submission form for Space Grants to communicate sponsorships to the USRA Space Grant Coordinator. Reports allow Coordinators to view sponsorship data real-time.

Web-Based Caspio Platform

- Form can be updated/changed as needs change.
- Not dependent on IT for changes.
- Allows users access to real-time data.
- Space Grants and Management are able to make decisions based on big data.

System Access

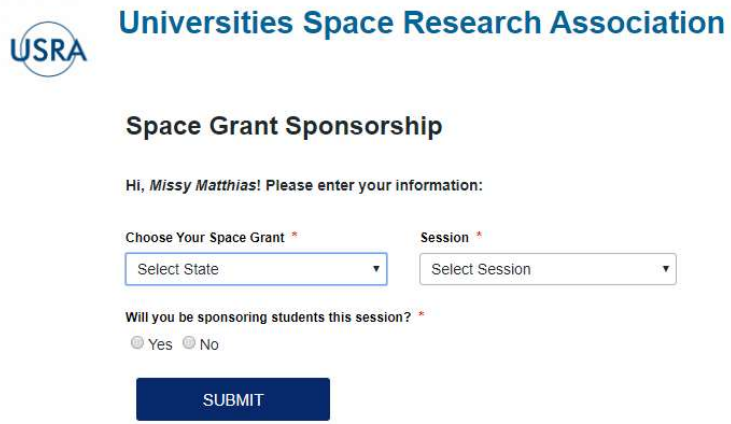
Space Grant Coordinators access the system through a login screen. Only authenticated users have access. The USRA Space Grant Coordinator maintains the authenticated user list. The list is communicated to the developer.



Sponsorship Form

Space Grant Coordinators will select their Space Grant and the session in which they wish to sponsor.

If the user selects “yes” the rest of the form displays. Selecting “no” will allow the user to easily communicate their sponsorship position for that session.

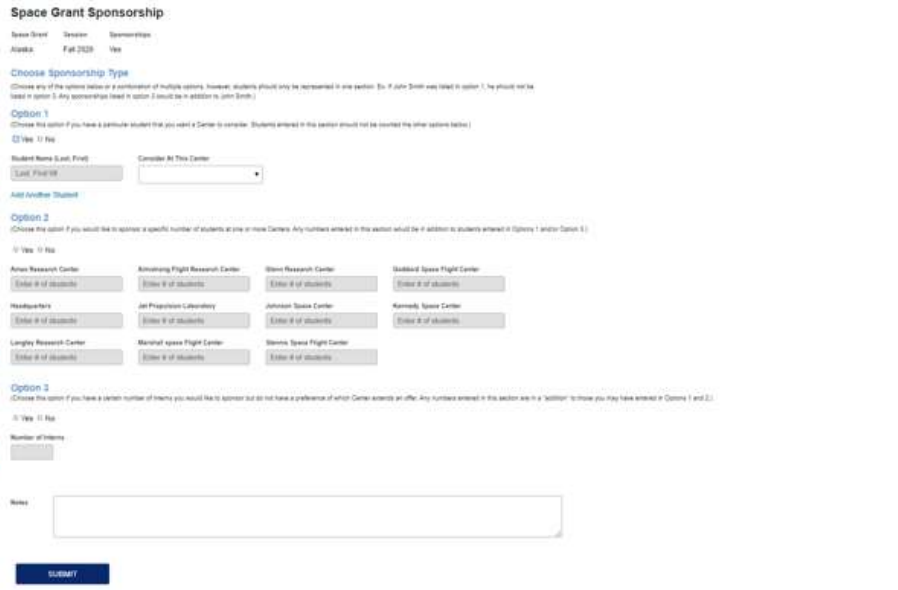


Sponsorship Form

Space Grants wanted to be able to sponsor students in three ways:

- Submitting a student's name and selecting the Center(s) in which they would like the student considered.
- Designating a particular number of students to sponsor at specific Centers. Student name is not known.
- Designating a certain number of students to fund. They don't have a student name nor do they care where they are placed.

Users can identify sponsorships using any of the sponsorship options below or a combination of options. No PII data is collected.



Viewing the Submitted Data

Once a sponsorship form has been submitted, the USRA Space Grant Coordinator receives an email. She and Internship Coordinators can view the sponsorship data that has been submitted by accessing the saved bookmarks in their browser.

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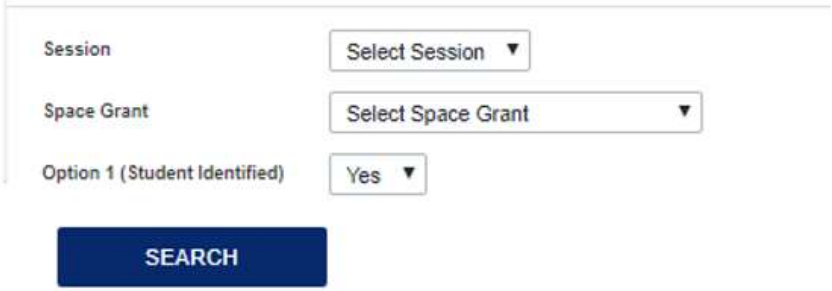
Search Screen

All reports have a search screen to allow Coordinators to filter the data they would like to see.



Report Data for Option 1 Sponsorships

Displays the student's name and every Center they/student would like to be considered for placement. All data is downloadable in Excel, PDF, or CSV formats.

Download Data

Space Grant Coordinator	Space Grant	Session	Student Name	Consider At This Center	Notes	Date Submitted
Mary Lanier	Oregon	Summer 2020	Diab, Jack	• Ames Research Center • Armstrong Flight Research Center • Glenn Research Center • Goddard Space Flight Center • Jet Propulsion Laboratory • Johnson Space Center • Kennedy Space Center • Langley Research Center • Marshall Space Flight Center • Stennis Space Center		2/10/2020
Mary Lanier	Oregon	Summer 2020	Engler, Maja	• Ames Research Center • Armstrong Flight Research Center • Glenn Research Center • Goddard Space Flight Center • Headquarters • Jet Propulsion Laboratory • Johnson Space Center		2/10/2020
Mary Lanier	Oregon	Summer 2020	Farley, Hannah	• Ames Research Center • Armstrong Flight Research Center • Johnson Space Center		2/10/2020
Mary Lanier	Oregon	Summer 2020	Gizzi, Emilio	• Glenn Research Center • Jet Propulsion Laboratory		2/10/2020
Mary Lanier	Oregon	Summer 2020	Parker, Rowan	• Armstrong Flight Research Center • Glenn Research Center • Goddard Space Flight Center • Jet Propulsion Laboratory • Johnson Space Center		2/10/2020

Report Data for Option 3 Sponsorships

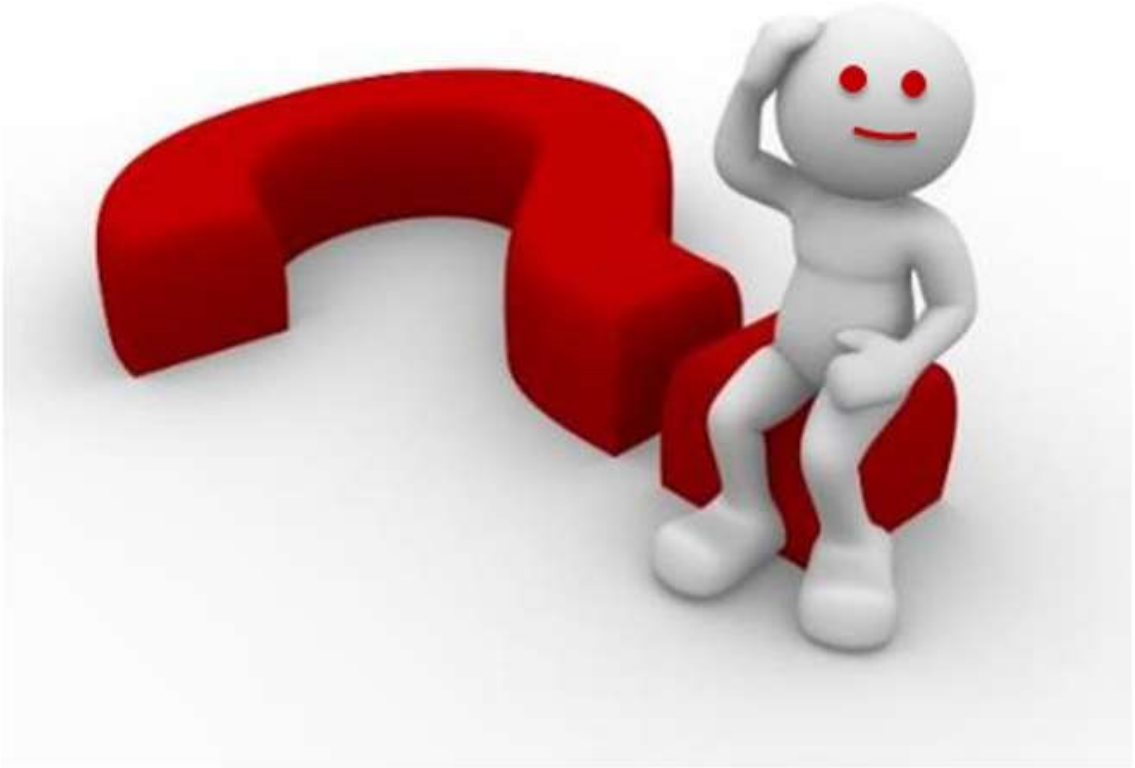
Displays the number of interns they would like to sponsor for the designated session. Student name or Center placement is not a factor for this type of sponsorship.

Download Data▼

Session	Space Grant	Number of Interns	Notes	Date Submitted
Summer 2020	Vermont	9	We will sponsor nine students on a first come first serve basis.	2/11/2020
Summer 2020	Vermont	9	This number of students have been identified and are in the offer stage or have accepted already. Therefore, until someone declines, we are fully committed for nine students as of today.	2/19/2020
Summer 2020	Nevada	5		2/19/2020
Summer 2020	Delaware	3		2/19/2020
Summer 2020	Minnesota	4	We would like the opportunity to at least pre-screen applications of any MN students are being considered for summer 2020 NASA Center internships BEFORE offers are made, just in case we happen to get more interest from Centers than we can afford. Generally speaking, we prefer to spread out our awards, so certainly no more than 2 funded by us to any one Center. As of now (Feb. 19, 2020), we have already committed to fund one student at the Langley Academy (outside of the OSSI application system so in addition to the 4 slots mentioned above).	2/19/2020
Summer 2020	Alaska	5	I can't commit to any student until my new grant is in place. As of 2/19 I have seen 4 requests. I typically sponsor undergraduate students first and if there are funds left over will consider sponsoring a graduate student.	2/20/2020
Summer 2020	Utah	1	We already committed to funding Justin Male for $7,300 for NASA Ames Aeromechanics Branch internship. We have funding ($7,300) for one additional undergraduate student at a NASA Center in summer 2020.	2/20/2020
Summer 2020	Oregon	2	Option 1 includes 12 students to be considered. If NASA is unable to place these particular students, we will consider other students. Oregon will fund a total of 14 undergraduate summer interns.	2/10/2020
Summer 2020	Kentucky	10	If possible, we would like time to review the applications and opportunities of any students that we are requested to fund. Please also help communicate our Space Grant goals to reach students of diverse backgrounds for this opportunity.	2/19/2020
Summer 2020	Wisconsin	2	WSGC has agreed to fund the following individuals: Taylor Peterson and Alec DiGioramo at Kennedy Space Center; Vineet Pasumarti at Langley Research Center; and Bennet Bartel, Hunter Huth, and Alex Plum at the Langley Academy. We can support 1-2 more students. If any of the above-mentioned students decline their offer, we can replace their position with another student. Christine Bolz	2/19/2020
Summer 2020	Delaware	2		2/19/2020

Records 1-11 of 11

Questions



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