



THE INNOVATION CATALYST

STRATEGIC PARTNERSHIPS OFFICE NEWSLETTER JULY 2020

ARE YOU LEAVING MONEY ON THE TABLE?

NASA's SBIR/STTR program is here to help

Each year, NASA's Small Business Innovation Research/ Small Business Technology Transfer (SBIR/STTR) program challenges small businesses nationwide to either develop or improve upon technologies that both fulfill NASA's needs and have substantial potential for successful commercialization. On July 9, the Strategic Partnerships Office (SPO) will feature Goddard's SBIR/STTR team at "The Coffee Break", a virtual event designed to answer your questions about technology transfer, partnerships, and SBIR/STTR.

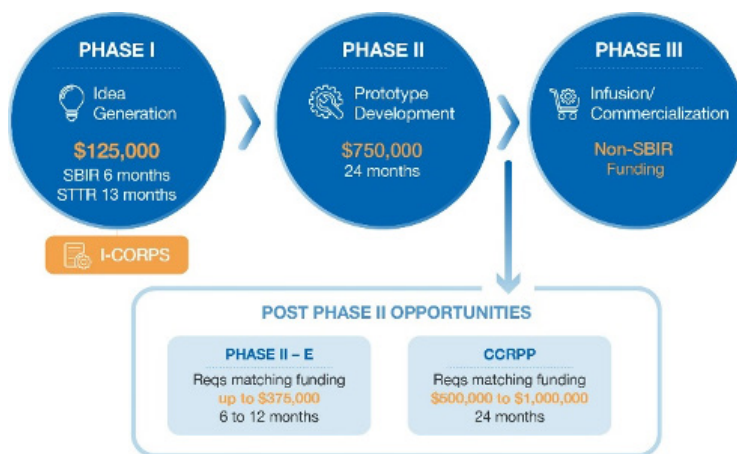
The SBIR/STTR team will share key insights about the millions of dollars in SBIR/STTR funds awarded each year to support Goddard science and technologies. For example, more than \$25 million in funding was allocated last year alone. Currently, NASA is within the 2021 Solicitation Development period, better known as "SolDev-2021." SolDev is the opportunity to nominate or recommend subtopic "scopes" to fill your science and technology gaps. Here's a preview, but for more information, tune into "The Coffee Break" on Thursday, July 9, at 1 pm. Please see [Dateline](#) for the link.

HOW THE PROCESS WORKS

In response to an initial solicitation, the SBIR/STTR program down-selects proposals based on various factors to best meet center and agency needs. The research, development, and demonstration of these innovative technologies takes place through several funding vehicle phases, shown in the diagram featured on this page. For additional details, visit <https://sbir.nasa.gov/content/nasa-sbirsttr-basics>.

LOW-HANGING FRUIT

Does your mission or program have an immediate science or technology gap that needs to be filled? You don't have to wait months for procurement or next year's solicitation. There are several initiatives that support small business innovation beyond Phase I and Phase II, which are known as "low-hanging fruit" opportunities. These are the Phase III, Phase II-E, and Civilian Commercialization Readiness Pilot Program (CCRPP) initiatives (<https://sbir.nasa.gov/content/post-phase-ii-initiatives>). The SBIR/STTR team will cover these opportunities in "The Coffee Break", after which you can schedule follow-on meetings within your labs or branches. To increase the likelihood of scheduling a meeting slot, come prepared with your availability.



EXTERNAL VERSION 201902

GET INVOLVED

Second only to NASA's Space Technology Mission Directorate and with an annual budget of over \$220 million, NASA's SBIR/STTR program can yield substantial impact to Goddard's missions. Additionally, there are numerous ways that Goddard's innovators can work with and benefit from the program and the small business community. For instance, serving as a technical monitor/

Contracting Officer's Representative (COR) or reviewer may meet certain critical elements of your performance plan. Time spent on technical evaluations can be used as continuing learning credits for the COR certification.

TECHNICAL REVIEWERS

For any Phase I or Phase II solicitation, hundreds of small businesses submit proposals on various topics justifying why they should receive funding and why their technology will help meet NASA's needs. A minimum of two subject matter experts are assigned to each proposal, wherein they perform an independent evaluation based on a number of criteria. Technical reviewers are not only a foundational piece of the entire SBIR/STTR process, but in evaluating these proposals, they stay abreast of relevant new and developing technologies. Also, by reviewing proposals and identifying their strengths and weaknesses, reviewers become stronger proposal writers as they pursue funding for their own work.

SUBTOPIC MANAGERS

Subtopic managers nominate subtopics and define the scopes that address agency needs. They also participate in mission directorate proposal prioritization and oversee their respective subtopics to ensure all proposals are reviewed, ranked, and evaluated. Lead and participating subtopic managers have a direct influence on Goddard and NASA's research and development future. Subtopic managers play a critical role in helping Goddard to remain

on the cutting edge of science and technology. The SBIR/STTR team encourages those who have been longtime reviewers or CORs to explore this option.

TECHNICAL MONITORS/CORs

Technical monitors and CORs work directly with firms that have been awarded SBIR/STTR contracts to manage the technology development and mentor the small businesses towards developing technologies that can be infused into NASA missions, research, and/or flight projects. By taking a hands-on approach, technical monitors and CORs ensure that promising technology is ready for infusion into NASA science and engineering missions, resulting in a win-win between the innovator, Goddard, NASA, and firm.

If you are interested in participating in the program, want to learn more, or want Goddard's SBIR/STTR team to visit your organization, please reach out to Marcus Payne (marcus.r.payne@nasa.gov) or call on Microsoft Teams.



ICECUBE DEPLOYMENT FROM ISS — *Using a technology developed under the 2001 SBIR solicitation, with funding from ESTO's InVEST Program and NASA's SMD CubeSat Initiative, Virginia Diodes fostered the development of terahertz receivers that are not only suitable for NASA's space and airborne applications, but also practical for a much wider range of scientific, military and commercial applications.*



VA001 AIRCRAFT BEING READIED FOR FLIGHT — *With the help of SBIR funding, Vanilla Aircraft fused ultra-long range and endurance unmanned aircraft technologies with cold-weather capabilities, thus enabling extended duration cryospheric research.*

THE SPARK MAGAZINE SUMMER 2020 PREVIEW:

Interview with Antti Pulkkinen

SOLAR SMALLSAT

Proposed SmallSat mission will test optical communication and heliophysics instrument

Optical communication, a first-of-its-kind heliophysics instrument, and creative rideshare approaches – from beginning to end, the proposed Science-Enabling Technologies for Heliophysics (SETH) mission is chock-full of innovation.

“This is a SmallSat technology demonstration mission,” explains Antti Pulkkinen, a Goddard scientist and principal investigator for SETH. “We’re demonstrating high data rate optical communications on a SmallSat, and we’re also demonstrating a new science instrument called HELENA.”

In 2019, NASA funded SETH for a \$400,000 mission concept study. If selected for further development, SETH will hitch a ride as a secondary payload with the Interstellar Mapping and Acceleration Probe (IMAP), a mission conducted by NASA, Johns Hopkins University’s Applied Physics Lab (APL), and Princeton University.

SETH evolved from a larger mission concept called CATSCANS, which featured a constellation of SmallSats equipped with solar imaging instruments in deep space. While figuring out engineering logistics, Pulkkinen and his team determined that CATSCANS would generate enormous volumes of data. With some members of the constellation stationed far from Earth, standard communications systems wouldn’t be able to handle the transmission of data from the spacecraft back to stations on the ground.

“This situation pushed us to look at new, innovative solutions for our communications system,” Pulkkinen says.

For more of this interview, check out The Spark Magazine Summer 2020 edition, coming soon! See back issues of The Spark here: <https://partnerships.gsfc.nasa.gov/news-events/publications/>.



Guess The Patent Drawing!

- 1 The name of this invention possesses a trademark, which is relatively rare for a Goddard technology.
- 2 It was invented by NASA innovators David J. Petrick, Alessandro Geist, Michael R. Lin, and Gary R. Crum.
- 3 This drawing is part of a larger suite of technologies that represent "a cross-cutting, in-flight reconfigurable Field Programmable Gate Array (FPGA) based on-board hybrid science data processing system" developed over several years at Goddard.

Can you guess the invention? [Click here](#) for the answer.

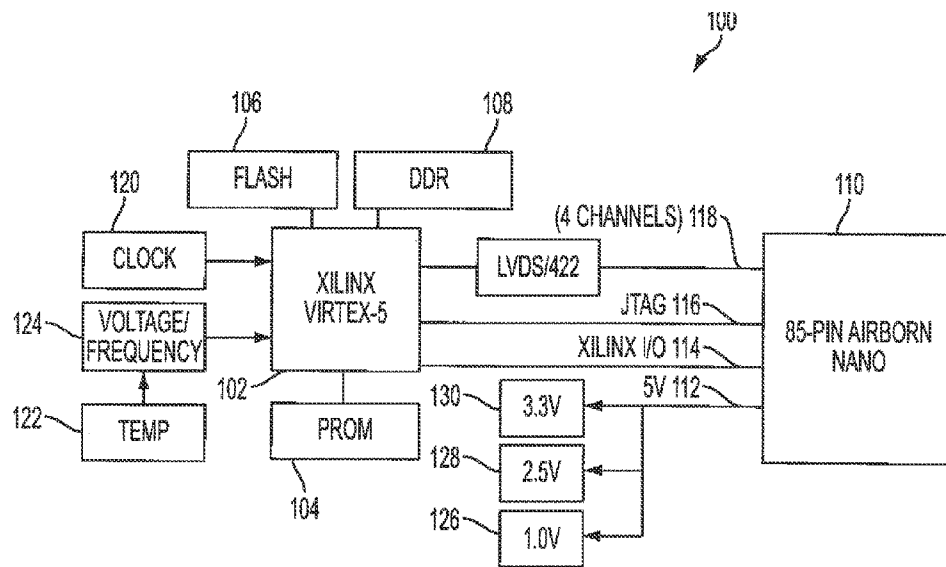


FIG. 1

Tech Transfer Trivia

- 1 How many Phase I proposals did the NASA SBIR/STTR program select for funding in 2020?
A. 203 B. 325 C. 409 D. 828
- 2 How many research institutions across the country are partnering with this year's Phase I STTR recipients?
A. 18 B. 24 C. 39 D. 45
- 3 What is the upper limit of funding that each 2020 Phase I company will receive?
A. \$25,000 B. \$75,000 C. \$100,000 D. \$125,000

[Link To Answers](#)

Upcoming Events

THE COFFEE BREAK

National Aeronautics and Space Administration



THE COFFEE BREAK
SBIR/STTR EDITION
JULY 9th 1-2PM
ON OFFICE
365 TEAMS

Please join the Strategic Partnerships Office (SPO) for our virtual event series, "The Coffee Break." For this serving, we'll be focusing on leveraging the SBIR/STTR* Program to fund Small Business Technology Development as a means to advance your Research/Missions/Flight Projects. In addition, we welcome any questions you may have about NASA's Technology Transfer Program or Goddard's Partnerships process. For more information on NASA's SBIR/STTR program, please visit <https://sbir.nasa.gov/>.

*SBIR/STTR - Small Business Innovation Research / Small Business Technology Transfer
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STRATEGIC PARTNERSHIPS OFFICE

www.nasa.gov

SMALLSAT CONFERENCE 2020 – VIRTUALLY AMAZING

August 1-6, 2020

Registration is **FREE** for the 2020 Small Satellite Conference, which will take place online this year. Former Goddard Center Director Chris Scolese is the conference's keynote speaker, and he is scheduled to talk at 3 p.m. Monday, Aug. 3, Eastern Time. Goddard will have a virtual exhibit with speakers, information about upcoming SmallSat and CubeSat missions, and a list of licensable technologies. Please check this link when the conference starts for a full schedule of Goddard events: <https://smallsat.wff.nasa.gov/SmallSat2020>.

For more information and to register, visit <https://smallsat.org>.

National Aeronautics and Space Administration



DON'T MISS NASA GODDARD'S VIRTUAL EXHIBIT AT
SMALLSAT CONFERENCE 2020

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