

Why Do Your Research With Volunteers?

Citizen Science (science that relies on volunteers) is a powerful research method. Let your investigation benefit from the collective skills of many motivated individuals. Volunteers can collect new data, extract new value from existing data, and apply critical thinking to analyze large datasets. Many volunteers become valuable research colleagues, writing code, reading and discussing the professional literature, and inventing and leading their own research projects. More than 400 NASA citizen scientists have co-authored published papers.

NASA Citizen Science has a track record of intellectual discovery. Project volunteers have discovered most of the comets listed by the Minor Planet Center, most of the ultracool brown dwarfs, the STEVE auroral phenomenon, 1/3 of Kepler's long-period transiting planets, and every existing laboratory sample of interstellar material. The Dipper star phenomenon, the oldest white dwarf debris disk, the "Yellowball" star forming regions, the SOHO comets, and the extreme T subdwarfs all were discovered by enterprising NASA citizen scientists who developed their own research tools and questions.

Citizen Science promotes inclusion and accessibility, extending the reach of open science. NASA Citizen Science is mandated to be an open and welcoming forum for everyone, regardless of citizenship status, age, or prior learning. Multiple NASA citizen science projects report strong participation from women, people with disabilities, or indigenous people.

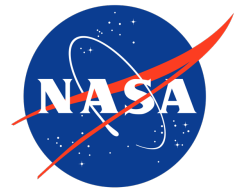
It's really, really fun. The joy of doing real NASA science draws smart, passionate participants from around the world, and changes people's lives! You and your professional colleagues will be inspired by their ideas and energy.

Share the Science!

See science.nasa.gov/citizenscience for more information.



Getting Started with NASA Citizen Science



- 1) Find a NASA-relevant science goal and task** that would benefit from 100–100,000 volunteers. Where there's big data, there's often a need for citizen science. Be sure to pick a project that's too big for a single scientist!
- 2) Choose a platform and/or a community.** Free citizen science platforms like Zooniverse.org, Anecdata.org, and CitSci.org make it easy to connect with volunteers and build websites and apps. Amateur science groups are eager to hear from you: DIY biologists, eclipse chasers, etc..
- 3) Create some training materials and plan a beta test.** Write text that introduces volunteers to the research field and explains the key science questions and the task at hand. Build a system to collect their contributions. (The platforms above make these steps easy!) Test your project with a small group of volunteers to ensure you'll get good data.
- 4) Apply to NASA's Citizen Science Seed Funding Program (CSSFP)** for 1 year of seed funding. Six-page proposals are due around January every year. Earth scientists: see the **Citizen Science for Earth Systems Program (CESP)**.
- 5) Apply to ANY relevant NASA Research Opportunities in Earth and Space Sciences (ROSES) element** for sustained funding. There is additional funding in ROSES to support citizen science. See below for more info! Answer yes to the citizen science question in NSPIRES! (nspires.nasaprs.com) Heliophysicists, see the **Heliophysics Citizen Science Investigators (HCSI)** program.
- 6) Learn more about the NASA citizen science program** by attending the **NASA Cit Sci Leaders series** (<https://nasacitsci.gmri.org/>) and by **joining our mailing list!** (Contact Marc.Kuchner@NASA.gov).

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NASA ROSES Funding for Citizen Science

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NASA's Science Mission Directorate (SMD) welcomes investigators to incorporate citizen science into their research. Proposals submitted to **any** NASA Research Opportunities in Earth and Space Science (ROSES) element, unless otherwise noted in the program element, may be entirely or partially citizen science-based. There are also special ROSES elements like CSSFP, CSESP and HCSI that focus specifically on citizen science. *Even if the ROSES element does not specifically mention citizen science, some additional funding is available to support proposals to that element that incorporate citizen science.*

Here are the answers to some frequently asked question about this process. Note that the implementation may vary across SMD divisions. Proposers are encouraged to read Science Policy Document SPD-33, which provides additional information about standards for evaluating citizen science projects. You can contact SMD citizen science officer Marc Kuchner (Marc.Kuchner@nasa.gov) or your division citizen science leads (see above) for more information.

To submit a ROSES proposal, go to <https://nspires.nasaprs.com>. For more information on ongoing SMD citizen science projects and for a link to Science Policy Document SPD-33, see <https://science.nasa.gov/citizenscience>.

F.A.Q.

1) What Is a citizen science?

Citizen Science is a form of open collaboration in which individuals or organizations participate voluntarily in the scientific process. Citizen Science Projects are science projects that rely on volunteers. Note that these definitions may not be shared by other organizations beyond NASA and the federal government.

2) Is citizen science outreach?

No. Projects that have outreach as their primary goal are not generally considered "citizen science" by SMD. Citizen science projects are held to the same rigorous standards as any SMD science project.

3) How can citizen scientists contribute to a science project?

Citizen scientists can contribute by enabling the formulation of research questions, creating and refining project design, conducting scientific experiments, collecting and analyzing data, interpreting the results of data, developing technologies and applications, making discoveries and solving problems. The Federal Crowdsourcing and Citizen Science Toolkit (www.citizenscience.gov/toolkit/case-study/#) contains a wealth of examples.

4) When is the ROSES citizen science proposal deadline?

There is no single deadline; there are many deadlines! Investigators are welcome to propose citizen science projects to any existing ROSES 2019 call. The deadlines are given in Tables 2 and 3 of ROSES. Question about which call(s) might be most appropriate can be directed to the program officers (see <https://science.nasa.gov/researchers/sara/program-officers-list>) and to the division citizen science representatives, listed above.

5) Is there funding available for citizen science projects through SMD?

Yes. There is funding available for citizen science projects through SMD. To indicate that an investigation could be eligible for citizen science funding, proposers to ROSES elements should go to the “Program Specific Data” page for your ROSES proposal in NSPIRES, and click the “yes” button next the question “Does this proposal contain a citizen science component?”.

6) Am I required to work with a particular existing community or platform? Or may I start my own citizen science community/platform?

Online citizen science communities/platforms like Zooniverse, iNaturalist, GLOBE, the Center for Game Science, eBird, etc., together engage several million volunteers, already primed to participate in citizen science projects. Many other relevant communities of amateurs exist, such as the IBM World Community Grid, the American Association of Variable Star Observers, etc. You are not required to work with any existing citizen science community or platform. But proposers who plan to develop a new platform or community should explain why they need to do so given the platforms/communities that already exist (or, if they have chosen to work with an existing platform/community, why they have made this choice).

7) May I add a citizen science component onto an existing project or a project that’s mainly students or professional scientists?

Yes. You may combine citizen science with any existing project. Citizen science methods should be chosen whenever they are the best tool to accomplish a scientific goal.

8) May I apply for funding to support a project that has already been active since before the new Citizen Science Policy (SPD-33)?

Yes. But awardees should first contact a) the technical officer on the award and b) the SMD citizen science officer (Marc.Kuchner@nasa.gov) before putting in such a request. Note that SPD-33 is applicable to all SMD-funded citizen science projects “initiated after the approval date of this document.” SMD will consider any existing project that receives SMD funding starting in ROSES 2019 as a project “initiated after the approval date” for this purpose.

9) Is it best to keep the citizen science component of my ROSES proposal separate from the rest of the proposal, e.g., so it could be descoped?

Check with the program officer for the ROSES call. The answer may vary from program to program.

10) May I include funding in my budget to pay salaries or other compensation to citizen scientists? Generally speaking, investigators who receive salary funding would not count as citizen scientists. Other forms of compensation to citizen scientists such as honoraria, meals, prizes, etc. may be allowable. Proposers will need to convince reviewers that such compensation will contribute to the scientific outcomes. In general, costs must be allowable under the government grants rules in the Code of Federal Regulations, chapter 2, part 200 (2 CFR 200), e.g., costs must be reasonable and necessary to successfully conduct the project. Proposers should email questions about what expenses are allowable to sara@nasa.gov.