

Frequently Asked Questions

For the current capabilities, please see the slides at the end of this document. Feel free to send additional questions to apeck@nsf.gov.

About the workshop application process:

- **Who will be invited?**
 - The workshop is open to everyone who is interested in contributing to future science or education projects at Arecibo Observatory (AO), and/or who wish to leverage involvement in other educational and cultural institutions in Puerto Rico to enrich programs that involve AO, and/or have thoughts about how AO could be used to strengthen STEM education in Puerto Rico.
- **Are non-US participants and non-STEM participants welcome?**
 - Yes!
- **How can people be involved if they don't already have a clear idea of what they want to contribute? Are there specific guidelines to prepare a proposal for the workshop?**
 - It is not necessary to have a clear idea of what you will contribute at this point, as long as you can provide a couple of sentences to indicate what your interests are. There are no specific guidelines, except that the applications for the workshop do not need to be long or elaborate. A few sentences or a paragraph is fine. We are not looking for developed proposals at this point, we just want to get a sense of where everyone's interest and expertise lies. So, for example, if you are an educator who thinks that AO is a great place for summer schools, you can simply say that you would like to help organize and participate in summer schools, you do not need to develop a specific plan for such a school for the application. There is also no requirement that applicants' interests be unique, you do not need to find a different idea from your colleagues in order to participate with them.
- **How do I make sure I'm on the options group that is in my best interest?**
 - We will use the information on the applications to suggest working groups to participants, but there will be plenty of time to visit with other groups and to decide what areas you would like to contribute to (or gain from) during the workshop. We hope that participants will also meet people that they will be able to productively collaborate with long after the workshop, as well.
- **Will teams be developed that can include people outside of the workshop?**
 - We do hope that teams will include people outside of the workshop, and that they will continue to work together toward developing future plans for AO after the end of the workshop. Participation in the workshop is not a prerequisite for joining any of the groups that participate in, or are formed at, the workshop.
- **How should we prepare from now until the opening of the registration for the upcoming workshop?**

- Just come ready to spend time with your colleagues, contribute to discussions and think about the future of Arecibo Observatory. No additional preparation is necessary.
- **Who will review the applications?**
 - The hope is that we will have the capacity to accommodate all interested applicants. In the event that we need to limit attendance, however, NSF has formed an internal committee of scientists and educators to accomplish this. The committee includes English and Spanish speakers, as well as staff born and raised in Puerto Rico, and covers a range of ages and genders.

About the workshop logistics:

- **How will these be organized and run?**
 - The workshops will be held virtually throughout the month of June. The timeline for the workshops is available on the arecibo.hub.ki website. A more detailed agenda for each workshop day will be available as we near the Kickoff for the event. Participants can anticipate breaks throughout the events. Participants are encouraged to plan to attend the entire event. At the same time, we understand that in our virtual world it is sometimes necessary to step away in between breaks in order to address our individual needs.
- **What content will be presented?**
 - The presentation content from the Town Hall is available on the arecibo.hub.ki website. Participants should be aware that this is a collaborative workshop, and any content they individually share is then available to the collaborative workshop.
- **How will the discussion groups be constituted and the members in them chosen?**
 - We will work to make sure participants meet and engage with as many people as possible. In the beginning, discussion groups will be randomized or based on expertise to help participants learn as much as possible about who else is in the workshop. As the workshop progresses, participants will form their own teams.
- **How are various groups going to present their formulations for the reconstruction of AO?**
 - Teams will form around their ideas for the observatory in the later sessions of the workshop. As teams form, they will be given opportunities to present their preliminary ideas for feedback, and then again to give their final presentations.
- **Will it be possible to attend some but not all of the workshops and still contribute significantly?**
 - It is highly encouraged that participants attend all of the workshops. However, we also encourage participants with scheduling conflicts to still apply and reach out via email to see if scheduling conflicts can be accommodated.
- **Can you add a roadmap of the June workshops detailing the entire process to the webpage?**
 - There is a timeline for the June workshops available on the arecibo.hub.ki website, as well as a general overview and goals for the workshop.

- **Many people who are not scientists may want a say due to the Observatory being a cultural icon. Will there be a workshop group for this topic too?**
 - The aim of this workshop is to assemble a diverse, multidisciplinary group of researchers, engineers, and educators. Educational and cultural programming are integral to the broad themes supported in this workshop, and experts in these fields are encouraged to apply.
- **In conducting these workshops, how will they create and facilitate a discussion space that is aware and responsive to the colonial history of Puerto Rico (e.g., making sure that proposed ideas that would take place in Arecibo include the local population that is kept well informed throughout these proceedings).**
 - The aim of this workshop is to assemble a diverse, multidisciplinary group of participants, with particular attention to residents of Puerto Rico. Our process works to help participants meet and engage in as diverse groupings as possible. In the beginning, discussion groups will be randomized or based on expertise. As the workshop progresses, participants will form their own teams. We will encourage participants to then disseminate their ideas and discussions to their respective communities.

About the workshop expected outcomes:

- **Why was the information in the webinar about funding and not about developing a new telescope? Why was there no clear message about long-term commitment from NSF? How did this movement get started and what would be the basis for submitting a reconstruction proposal?**
 - The goal of this workshop is to engage members of the community in thinking about ideas for developing the Arecibo Observatory as a center in which the residents of Puerto Rico and the rest of the world can flourish in the fields of astronomy, atmospheric and geospace science, STEM education and cultural enrichment programs moving forward. NSF is committed to participating in this future development but is not restricting the ideas to the construction of a new telescope. That is certainly one long-term possibility, there are many others, and also near-term projects that could bridge the gap while a potential large project is being designed. Any and all ideas for the future of AO, whether they arise as part of the workshop or by any other means, can be proposed to a variety of funding sources.
- **How will the plan to build a new Arecibo radio telescope be implemented and what would be the first steps? What kind of support is the NSF interested in regarding an Arecibo 2.0 telescope? Is any part of the new workshop about Arecibo 1.x, not Arecibo 2.0?**
 - There is no current plan to build a new radio telescope, although this is certainly an idea worthy of discussion. The first steps for new projects depend on the scale. NSF has established processes for small, mid-scale, and large construction projects. The larger projects require formal design reviews and any new construction may also require an environmental impact study. For this workshop, however, our main goal is to explore a broad range of options, for the short-, medium- and long-term, which should engage all segments of the community and may be complementary, and we will discuss the first steps of all of these. In that sense, all of the workshop is about “Arecibo 1.x” at some level.

- **How will the entire process be wrapped up and summarized when there is no overall convenor/governing-/scientific-organizing body? Are these workshops designed to make the community produce a large document of some sort?**
 - We hope that there will be a broad range of complementary ideas, any or all of which can be developed into proposals. There is no expectation that this process will be summarized into one document.
- **Can you provide the list of relevant funding opportunities on the website? Who will make the decisions between the options, NSF, NASA, or someone else? Will outside funding be considered?**
 - This is an excellent question and we will work to compile a list of the most relevant funding opportunities by the start of the workshop.
- **Will there be applied boundary restrictions in regard to whether the reconstruction serves all three communities and also whether new observing opportunities arise from the new AO facility?**
 - Again, we are not solely discussing the reconstruction of the 305-m telescope. For the very immediate future, one boundary condition is the existing infrastructure and consideration of what science could be enabled if the reflector were to be repaired. For any new construction, while we strongly encourage ideas that will serve all segments of the community, there are no boundary conditions. New observing opportunities would certainly be encouraged.
- **What topics is NSF willing to fund? Will proposals heavy on broadening participation be considered for funding? Will the expansion of AOSA and other educational initiatives for the benefit of Puerto Ricans be treated with the same seriousness as scientific proposals?**
 - There will be no funding allocated as a result of this workshop, proposals should be submitted to funding agencies following the normal process. NSF encourages proposals of a range of scales and topics, and proposals heavy on broadening participation or focused on existing or new educational opportunities for residents of Puerto Rico will absolutely be considered.
- **Will NSF support proposals to organize further workshops to re-invent Arecibo or develop longer-term ideas in greater depth?**
 - Both RAPID and EAGER ([here](#)) proposals may be appropriate for supporting workshops and developing ideas further. Feel free to contact the Arecibo Program Officers if you have specific ideas for additional workshops.
- **How does the NSF plan to communicate to the community that won't be in attendance--a community that of course includes the people of Puerto Rico--the significance of this workshop and the ideas that come out of it?**
 - For this, we would very much like to have your help. Please spread the word, involve your communities, feel free to engage your colleagues and friends in discussions about any topics raised at the workshop. People who wish to provide feedback to the NSF about the workshop or any other aspect of Arecibo Observatory planning are encouraged to send email to Arecibo-feedback@nsf.gov.

