Restore US Leadership in High Sensitivity Radio Astronomy and Radar Science at the Arecibo Observatory

The National Science Foundation's decision to abandon the science mission of the Arecibo Observatory is counter to Congressional guidance and established national science and education policy and precedent.

We ask Congress to support and hold oversight hearings on NSF's proposed abandonment of the science mission of this unique world-class facility, and what it will mean for the future of U.S. leadership in the crucial fields of radar and radio science. Members of Congress have already shown their strong support for Arecibo.

The Senate unanimously "encourages the National Science Foundation . . . to study means of replacing the scientific capabilities that were lost at the Arecibo Observatory, utilizing new state-of-the-art technologies at the site." (S.Res. 467).

In the CHIPS Act Section 10365, Congress acknowledged the severe loss that the collapse of the Arecibo Observatory's main telescope represents "of astronomical observation capabilities, scientific research and development, planetary defense capabilities, and applied science capabilities for the United States" and recognized its enormous contributions over 60 years as the world's greatest radio/radar telescope.

Therefore, Congress "encourages the National Science Foundation, in consultation with other Federal agencies, to explore opportunities for strengthening and expanding the role of the Arecibo Observatory in Puerto Rico through education, outreach, and diversity programs, and **future research capabilities and technology at the site**."

NSF has responded to the call for STEM education, but it has ignored Congress's call for future research capabilities and technology at the site.
The Arecibo Observatory was supported through NSF and NASA funding for almost sixty years, including two major upgrades. In addition to Members of Congress, the National Science Board (NSB) in their "Vision 2030", calls for the U.S. to "strategically build science and engineering infrastructure and capacity in the nation's under-served areas and institutions, while retaining excellence and capacity where it already exists." Closing the research facilities at Arecibo Observatory is in direct opposition to the National Science Board recommendation to expand the geography of innovation.

Even in NSF's latest strategic plan, their two top priorities are (1) "Empower STEM talent to fully participate in science and engineering" which includes ensuring that "all citizens share in the benefits that flow from research." (2) "Create new knowledge about our universe, our world and ourselves." How could these goals possibly be served by shutting down the science mission of a world class research institution in an Hispanic region, laying off its specialized workforce, and retaining only their educational programs?

Arecibo Science Advocacy Partnership (ASAP): http://areciboscience.org
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Resources

National Science Board Vision 2030
The National Science Board establishes the policies of the NSF and advises Congress and the president on science and related issues.
https://www.nsf.gov/nsb/publications/2020/nsb202015.pdf

For science and society, the future begins with better dreams
The Chair of the National Science Board outlines 4 steps the U.S. can take to remain an innovation leader capable of addressing today's manifest challenges.
https://www.elsevier.com/connect/for-science-and-society-the-future-begins-with-better-dreams

H. R. 4346: The CHIPS and Science Act of 2022
https://www.commerce.senate.gov/2022/8/view-the-chips-legislation