



## Future Plans for the Arecibo Observatory

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### 1. Extended Abstract

The Arecibo Observatory (AO) has been a critical scientific site for over 53 years, performing innovative research in the areas of radio astronomy, space and atmospheric sciences and planetary sciences. The Observatory, which is the World's most sensitive incoherent scatter radar and radio telescope is currently owned by the National Science Foundation (NSF) and operated by SRI International under a facility cooperative support agreement ending in March 2018. The site is funded by the NSF for astronomy and aeronomy scientific programs, and by NASA for the planetary radar operations. AO has been under severe financial pressure for over a decade, having received a 30% operational budget cut in 2009; and faces even tougher challenges in the years ahead, as NSF initiates divestment processes for several of their large facilities. A recently released solicitation by NSF describes a future operations plan that reduces the current funding profile by 75% over five years. While some panel reviews written at the beginning of the decade questioned the observatory's scientific accomplishments and the rationale behind assigning significant NSF funds to support its operation, it is impossible to miss the importance of the site given recent accomplishments. These include the commissioning of a new heating facility for ionospheric studies, playing a key role in gravitational waves and fast radio burst research, and supporting NASA's mission of protecting our Planet by characterizing and tracking potentially hazardous asteroids.

This paper outlines the numerous efforts the current management team has taken to position the site for future success given the uncertainty of NSF funding. This includes a strong focus on increasing operational efficiencies, creating diverse funding streams and evaluating out of the box proposals from private and public organizations. It also describes the process utilized by the management team to identify and grow the key operational areas that differentiate Arecibo from other sites around the World.

The Arecibo Observatory has a bright future ahead of it, although under a different operational model and with a more diverse mission. However, one thing is certain; it will remain true to the core value that has ensured its success over the past 5 decades: excellence in scientific research and discovery.