

117TH CONGRESS  
2D SESSION

# S. RES. 467

Recognizing the contributions made by the 305-meter radio telescope at the Arecibo Observatory.

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## IN THE SENATE OF THE UNITED STATES

DECEMBER 2, 2021

Mr. BLUMENTHAL (for himself, Mr. RUBIO, Ms. WARREN, Mr. MARKEY, Mr. SCOTT of Florida, Mr. MENENDEZ, Ms. SINEMA, and Mr. MURPHY) submitted the following resolution; which was referred to the Committee on Commerce, Science, and Transportation

FEBRUARY 10, 2022

Committee discharged; considered, amended, and agreed to with an amended preamble

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# RESOLUTION

Recognizing the contributions made by the 305-meter radio telescope at the Arecibo Observatory.

Whereas the Department of Defense began developing the Arecibo Observatory located in Barrio Esperanza, Arecibo, Puerto Rico, during the 1950s, and its characteristic instrument, a large radio telescope of 305 meters in diameter was completed in 1963;

Whereas the facility was later owned by the National Science Foundation, and supported by the National Aeronautics and Space Administration and various university partners;

Whereas the Arecibo Observatory's 305-meter fixed spherical radio telescope, was the world's largest single-dish radio telescope until the Five-Hundred-Meter Aperture Spherical Radio Telescope located in Gishou, China, began observing in 2016;

Whereas the 305-meter radio telescope made unparalleled contributions to the fields of radio astronomy, planetary, and atmospheric sciences, and played a role in inspiring thousands of students in Puerto Rico, the Nation, and the world to pursue careers in STEM fields through the Arecibo Observatory Education and Public Outreach Programs;

Whereas the radio telescope significantly advanced the field of radio astronomy, including the first indirect detection of gravitational waves, the first detection of extrasolar planets, innumerable contributions to the field of time domain astronomy and the study of the interstellar medium, and played a key role in the search for extraterrestrial intelligence;

Whereas the Arecibo Observatory had the best planetary radar system in the world, used by the National Aeronautics and Space Administration for near-Earth object detection and was a part of the agency's planetary defense program;

Whereas the planetary radar at the Arecibo Observatory has contributed fundamentally and significantly to the knowledge of the solar system;

Whereas the Arecibo Observatory's Incoherent Scatter Radar and supporting facilities have provided fundamental understanding of the ionosphere and upper atmosphere, and the interface between the atmosphere and space that pro-

protects the planet from solar wind, meteors, and other potential threats; and

Whereas December 1, 2021, marks the 1-year anniversary of the uncontrolled collapse sustained by the radio telescope after a series of cable failures in tower 4: Now, therefore, be it

1       *Resolved*, That the Senate—

2               (1) acknowledges the loss of the Arecibo Ob-  
3       servatory’s radio telescope due to its collapse and its  
4       implications for the loss of a unique world-class mul-  
5       tidisciplinary science facility which conducted re-  
6       search in the areas of space and atmospheric  
7       sciences, radar astronomy and planetary sciences,  
8       astronomy, and astrophysics;

9               (2) acknowledges that the uncontrolled collapse  
10       of the 305-meter radio telescope represents a re-  
11       markable loss of astronomical observation capabili-  
12       ties, scientific research and development, planetary  
13       defense capabilities, and applied science advantage  
14       for the United States;

15              (3) recognizes the rich scientific, educational,  
16       and economic benefits that the Arecibo Telescope  
17       has made to the people of Puerto Rico, the Nation,  
18       and the world;

19              (4) recognizes the work and contributions made  
20       by the thousands of dedicated staff who have sup-

1 ported the Arecibo Observatory for close to 6 dec-  
2 ades;

3 (5) commends the National Science Foundation  
4 for convening a virtual workshop in June 2021, to  
5 explore ideas for future scientific and educational ac-  
6 tivities at the Arecibo Observatory; and

7 (6) encourages the National Science Founda-  
8 tion, in consultation with the National Aeronautics  
9 and Space Administration, and other agencies to  
10 study means of replacing the scientific capabilities  
11 that were lost at the Arecibo Observatory, utilizing  
12 new state-of-the-art technologies at the site.

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