

117TH CONGRESS  
1ST SESSION

# S. RES.

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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

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Mr. BLUMENTHAL submitted the following resolution; which was referred to  
the Committee on \_\_\_\_\_

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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, Are-  
cibo, Puerto Rico, during the 1950s, and its char-  
acteristic instrument, a large radio telescope of 305 me-  
ters 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 part-  
ners;

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 Spher-

ical Radio Telescope located in Gzhou, 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 an essential 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 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-  
21      ported the Arecibo Observatory for close to 6 dec-  
22      ades;

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

5           (6) encourages the National Science Founda-  
6           tion, the National Aeronautics and Space Adminis-  
7           tration, and other agencies to study means of replac-  
8           ing the scientific capabilities that were lost at the  
9           Arecibo Observatory, utilizing new state-of-the-art  
10          technologies at the site.