

KIRKUS REVIEWS

TITLE INFORMATION

THE ARECIBO ANTENNA

Helias Doundoulakis

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BOOK REVIEW

A comprehensive insider's history of a cutting-edge radio telescope.

In this posthumous work, Doundoulakis (who died in 2016 at age 92) parlays his acumen as a structural engineer into an inclusive study on the Arecibo Antenna. Located in Puerto Rico, the iconic structure was the world's largest single-aperture telescope for a span of 53 years until 2016; its collapse in 2020 forced its decommission by the National Science Foundation. The focus of Doundoulakis' book is the history of this device, greatly elaborating on its revolutionary inception, its suspension design, and its placement in a natural sinkhole, which was completed in 1963. He writes candidly of a controversy regarding one of the observatory's original patents, which he says that he and his brother George, a brilliant physicist, filed and received. Doundoulakis attributes the eventual success of the apparatus to pioneering Cornell engineer William Gordon, himself, and George, collaboratively, with funding from the U.S. Air Force. The explanatory text also includes biographical material about entrepreneur William Casey (who served as CIA director in the 1980s) and patent attorney Constantine Michalos, who both assisted the author in the patent's acquisition. The text is admirably descriptive, and its density of information is likely to appeal most to readers who are already familiar with the science of astronomy. The book also contains an impressive trove of photographs in an appendix that spans the lifetime of the Arecibo Antenna. The inclusion of a substantial archive of case files, research reports, diagrams, artistic renderings, and budget calculations is meticulous and often fascinating. An obvious labor of love for Doundoulakis, it offers a fitting personal coda with an account of a trip that he and his wife took to the observatory in the early 1990s.

A scholarly presentation of an architectural wonder.