NEW BOOKS & MEDIA

Women of Arecibo

Women in Astronomy

AAS Committee on the Status of Women in Astronomy, 2021

The collapse of the 305-meter radio telescope at Arecibo Observatory last December continues to affect the astronomy community. Women astronomers share their stories and memories of Arecibo in a new series on the *Women in Astronomy* blog, maintained by the American Astronomical Society's Committee on the Status of Women in Astronomy. The series adds a gender-based dimension to the many eulogies for the legendary observatory. The first entry, by postdoc Allison Smith, describes how the famous observatory served as a "beacon" to her during graduate school; it was while working there that she first gained confidence as an astronomer. Smith, who was at the observatory when it collapsed, hopes that the astronomy community will replace it with a new instrument. —RD

The Mission

A True Story

David W. Brown

Custom House, 2021. $35.00

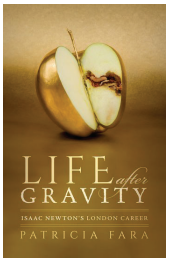
Centered on the 17-year effort to develop a spacecraft to study Jupiter's icy moon Europa, *The Mission* relates the story of the *Europa Clipper*, also known as the *Europa Multiple Flyby Mission*. After a brief biography of project scientist Robert Pappalardo, journalist David W. Brown launches into an intriguing narrative that involves NASA, the US government, and the political hurdles scientists faced to get a space mission—particularly one not destined for Mars—from concept to approval. Once a pipe dream, the *Europa Clipper* is now set to launch in 2024. —CC

Built for Mars

The Perseverance Rover

National Geographic, 2021

In February, the rover *Perseverance* successfully landed on the Martian surface. The probe managed a daring entry into the atmosphere and is now surviving under harsh surface conditions. How did NASA take the lessons learned from its 2011 rover *Curiosity* and apply them to *Perseverance*? National Geographic's *Built for Mars* documentary delves into this question by following a team of technicians and designers as they build, test, and launch *Perseverance* to the red planet. We see the stress of technicians as they carefully "drill a hole into an instrument worth millions of dollars," and we learn about the rover's small helicopter, its reentry parachute, and the extreme measures taken to reduce contamination of the spacecraft before its launch. Any budding technologist will find *Built for Mars* fascinating; it is available now on National Geographic's website. —PKG



Life After Gravity

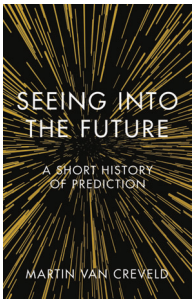
Isaac Newton's London Career

Patricia Fara
Oxford U. Press, 2021. $32.95

Historian of science Patricia Fara explores lesser-known facets of Isaac Newton's later life in this new book on his career as a high-ranking civil servant at the Royal Mint in early modern London. It turns out, for example, that Newton's hatred of Catholicism drove his support of Protestant monarchs King William III and Queen Anne in the 1690s and 1700s. He feared the return of the Stuart dynasty, a Catholic branch of the royal family that William had overthrown in 1688. In addition to recounting Newton's role in political intrigue in the British court, Fara also explores less savory aspects of his career, such as his financial losses in the collapse of the South Sea Company, which played a large role in the transatlantic slave trade (see PHYSICS TODAY, July 2020, page 30). Well-written, engaging, and timely, *Life After Gravity* casts a critical eye on one of the most famous figures in the history of physics. —RD

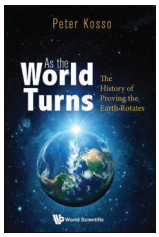
Seeing into the Future

A Short History of Prediction



Martin van Creveld
Reaktion Books, 2020. $24.00

What will the weather be like tomorrow, next week, or next year? Will there be another war, famine, or global pandemic? Will the stock market rise or fall? In *Seeing into the Future*, military historian and theorist Martin van Creveld provides an overview of some of the myriad methods humans have devised over the millennia to foretell what is to come, from the ancients' use of prophecy and astrology to today's mathematical algorithms. In addition to delving into when, where, why, and how those techniques originated, he discusses such questions as why prediction is so difficult, whether modern humans are any better at making predictions than our ancestors were, and whether knowing the future is a good thing. —CC



As the World Turns

The History of Proving the Earth Rotates

Peter Kosso
World Scientific, 2020. $58.00

Until the development of the space program in the latter half of the 20th century, humans had no way to leave Earth and directly observe whether it rotates. So how did Nicolaus Copernicus, Galileo Galilei, Isaac Newton, and other early scientists determine that it does? Philosopher of science Peter Kosso addresses the question by delving into the history of humans' study of Earth and the heavens, from the time of the ancient Greeks to the present day. His thought-provoking discussion explores the difference between appearance and reality, the nature of scientific evidence and method, and the apparent dichotomy between the propositions that Earth moves and that all motion is, ultimately, relative. —CC PT