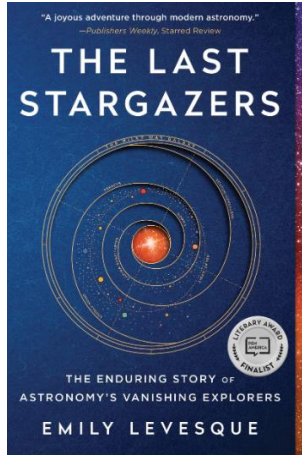


## REVIEW OF THE LAST STARGAZERS BY EMILY LEVESQUE

A backyard encounter with Halley's Comet when she was just eighteen months old is what Emily Levesque says launched her on a career in Astronomy. An undergraduate degree in physics at MIT and a PhD in Astronomy from the University of Hawaii set the stage for her adventure. Levesque's book The Last Stargazers, published in August 2020, relates the stories of working astronomers as well as major developments in the science and technology of Astronomy from the 1920's to the present.

In the introduction to this enjoyable book, Levesque recounts her night of terror at the Subaru Telescope in Hawaii "a 630 ton beast housed one floor above my head in a fourteen story dome," 14,000 feet above sea level. After submitting a 12-page proposal, Levesque was granted a night of observation to "point this telescope at a handful of galaxies five billion light years away." Or would have, until the telescope operator told her that the "bloon" sound they had just heard was one of the supports for the four-foot wide, four hundred pound secondary mirror suspended 73 feet above the primary mirror. Racing through her mind were the many "I broke the telescope" stories she had heard including one involving the collapse of the Green Bank radio telescope which she eerily recalled had fallen due to the failure of a *mechanized support*. Her mind racing between images of broken glass and the process of resubmitting for an observation session probably a year hence, Levesque gingerly followed the advice the telescope's maker had just given and turned the power to the computerized mount *off* and *on* again.



A dozen years later, Levesque wrote this book to describe the hair-raising, annoying, and wonderful things that can happen to astronomers during their overnight sessions observing the heavens at some of the most remote spots on Earth. Her stories range from descriptions of astronomers in the early 1900's who climbed into frigid cages at the prime focus point of their telescopes to expose jagged-edged pieces of photographic glass plates; to the present day when modern astronomers submit detailed observation requests which are queued up and prioritized against thousands of other submissions to maximize the efficiency of telescope resources; and finally to the future as we build robotic telescopes which will tirelessly scan portions of the night sky generating multiple terabytes of information for computer programs to analyze and then flag anomalies for "human" astronomers to pursue.

Apart from engaging stories of individual astronomers, there are compelling themes here like the struggles of women to break through the male-dominated profession (think bathroom runs in *Hidden Figures*) and first-hand accounts of achievements such as the first detection of gravitational waves in 2017.

At the conclusion of the book, Levesque considers the question of why we study the stars. Her answer is like those accompanying other human endeavors: "We don't know exactly why, but we must."

--Steve McDonald