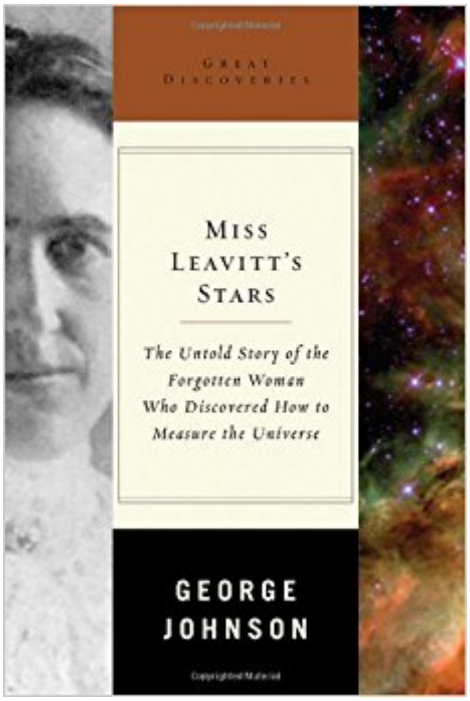
Miss Leavitt's Stars: The Untold Story Of The Woman Who Discovered How To Measure The Universe (Great Discoveries)



Synopsis

â œA short, excellent account of [Leavittâ ™s] extraordinary life and achievements.â •â •Simon Singh, New York Times Book Review At the beginning of the twentieth century, scientists argued over the size of the universe: was it, as the astronomer Harlow Shapley argued, the size of the Milky Way, or was there more truth to Edwin Hubbleâ ™s claim that our own galaxy is just one among billions? The answer to the controversyâ •a â œyardstickâ • suitable for measuring the cosmosâ •was discovered by Henrietta Swan Leavitt, who was employed by the Harvard Observatory as a number cruncher, at a wage not dissimilar from that of workers in the nearby textile mills. Miss Leavittâ ™s Stars uncovers her neglected history, and brings a fascinating and turbulent period of astronomical history to life.

Book Information

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Customer Reviews

In the early 1900s the "computers" at the Harvard University Observatory were women, paid 25 cents an hour to pore over photographic plates taken with the university’s telescope and to catalogue changes in the sizes and locations of stars. Henrietta Leavitt was an unmarried clergyman’s daughter who began working at the observatory soon after graduating from Radcliffe. The director quickly recognized her skill and made generous allowances for the long absences occasioned by her apparently delicate health and family problems. New York Times science writer Johnson (Strange Beauty) relates that Leavitt’s singular contribution to astronomy came when she

recognized that cyclical changes in the size of Cepheids, giant variable stars, could be correlated with their luminosity. Once luminosity was known, a star’s distance from Earth could be calculated. Leavitt wasn’t interested in pushing her discovery to its logical conclusion, but other astronomers quickly grasped the ramifications for calculating the size of the Milky Way and the universe. In recent years, Leavitt has joined Rosalind Franklin in receiving long overdue recognition. Scant documentation exists for Leavitt’s life aside from correspondence with the observatory, so readers shouldn’t be surprised to discover that this excellent book is more about the search to measure the universe than about Leavitt’s life. Nevertheless, it’s a fine tribute to a remarkable woman of science. 10 illus. not seen by PW. Agent, Esther Newberg.(June)

In the early 20th century, colorful, strong-willed astronomers debated the size of the universe: Was the Milky Way just one galaxy among billions, or did it constitute the entire universe? At the same time, in the backrooms of the Harvard Observatory, a not-so-colorful, rather plain young woman was hard at work. Henrietta Swan Leavitt was paid 25 cents an hour as a human "computer": she examined photographic plates, concentrating on variable stars--those that periodically change brightness--looking for anomalies. Eventually she discovered a direct correlation between the time it took a star to go from dim to bright and how bright it actually was--and thus a way to use these stars as a cosmic measuring stick. On the shoulders of her accomplishment, Edwin Hubble was able to prove that the Milky Way is but one galaxy among many. Little information about Leavitt exists--a few grainy photographs, some letters, no diary. From such scraps, the well-known science writer George Johnson fashions a fascinating picture of her life: her passion for astronomy, the humiliations at the hands of her male colleagues, the constant interruptions of illness, including her growing deafness, and finally her death from stomach cancer at age 53. His grace in bringing her to life is matched by his lucidity in explaining difficult scientific concepts. Unfortunate in life, Miss Leavitt is very fortunate in her biographer. Editors of Scientific American --This text refers to an out of print or unavailable edition of this title.

This short book (130 pages of text) is an essential addition to the history of astronomy. Very little data is available about Henrietta Leavitt, the woman who made one of the most important discoveries in astronomy. As the author notes, she left no diaries, no boxes of letters, no memoirs, and she did not brag about her work. Given the lack of information available, George Johnson does

a great job of weaving what we do know of Leavitt’s life and work into the story of astronomy in the early 20th century. Johnson is a gifted writer. Sentences and paragraphs are easy to follow; all the references to the people discussed in the book are clearly explained. His use of the "village in the canyon" analogy to explain the strengths and weaknesses of determining parallax is excellent. The relationship of Leavitt’s incredibly detailed work on Cepheids to Hubble and Shapley is developed in a way that shows an often gross omission of credit on their part, yet the book is not about blame. Johnson points out the sexist hierarchical structure in astronomy at the time and the role of women as human computers. (They were actually called "computers.") Hubble and others, who should have gone beyond that social limitation, simply assumed that their human computer was not to be given credit. Johnson lets the facts about Leavitt’s work speak for themselves and the reader can draw his or her own conclusion. It is true that we never get to know Leavitt in any deeply personal way but that can hardly be held against the book. Instead of speculating based on nothing, Johnson takes the information that we do have and turns this into a testament to a brilliant woman whose work became foundational for modern astronomy. The book is well worth obtaining for anyone interested in the history of science.

Miss "Leavitt’s Stars" is a book I had wanted to read for a long time. I expected it to be a biography of Miss Leavitt. I’d estimate that perhaps 25% of the book is about Miss Leavitt. The remained of the book is about the astronomers involved in understanding our universe.and realizing that our Milky Way galaxy is just one galaxy among countless galaxies.The author states a great length that there is so little biographical information available on Miss Leavitt and hence a biography is a difficult thing to write a hundred years later. If you are familiar already about the history of Cepheid Variable stars and how they became the foundation to determining the size of our Milky Way and the distances to the nearby galaxies, then this book may not have much to offer you.

I like Mr George Johnsons writing style and will definitely be watching for new books from this author.In my mind Mr Johnson masters the difficult art of telling a technical related story without loosing focus, without being sidetracked by technical details, and without using thousands of pages.For the price it is a five star book.

I found this to be a wonderful read. It gives you an insite to those who worked so hard in the field of astronomy without proper recognition. For those who are interested in the history of U.S. astronomy I highly recommend this book

All new information to me. Very interesting. I recommend it.

George Johnson is an unappreciated talent.

Quality shipping and the book is a good read too.

I am not one to normally write a negative review, but I was really disappointed in this book. My disappointment was not due to the author’s skills however. The book itself is well-written and articulate as far as it goes.Rather, I was disappointed because there is not much depth at all provided about Ms. Leavitt herself. In fairness, I should have been forewarned by the apologia given by the author at the beginning of the book. The author indicated in the first pages that there was not a lot of additional or archival information available about Ms. Leavitt, aside from the achievements that she is already famous for. Thus, we do NOT learn much about Ms. Leavitt’s life, motivation or personality. In a real sense, I kind of wonder why the book was written at all; as filler, a lot of the book is about Hubble and his discovery of an expanding Universe and there is much about Shapley, Pickering, and other figures. And of course there is a description of Ms. Leavitt’s notable contribution to astronomy concerning her observations of Cepheid variables and the period/luminosity relation.In fairness, if you were expecting to learn a lot about Ms. Leavitt’s life, motivation and personality, the book is short on this. As indicated, the author honestly admits as much at the beginning of the book. Unfortunately, as a result, he was forced to fill the book with material about others (Hubble, etc.) and we really end up with no better insight into Ms. Leavitt than would have been the case had the book not been written. The title is appropriate in a sense because "The Untold Story" of Ms. Leavitt’s life still remains untold.

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