An acre of glass

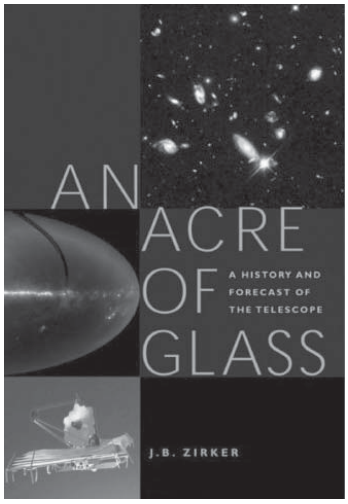
by J. B. Zirker

Johns Hopkins University Press, 2005. ISBN 0-8018-8234-6. Pp 345, £20.00 (hbk)

I enjoyed this book right from the very first sentence. The first paragraph in the prologue describing a sunset on Mauna Kea is written more in the style of an introduction to a novel than the start of a textbook on astronomical telescopes.

The book gives a detailed description of telescope making through history. The story of the telescope is interspersed with examples of the science that each telescope in turn achieved. Rather than distract from the technical content, this helped to bring the story alive. It outlines how the idea of each telescope was born and how finances were raised to build it and technical problems overcome. If you have an interest in telescopes then there is much in this book with which you might be familiar, but what this work does is to bring the story of each telescope and put it into a chronological history. As a one time professional telescope maker I have always kept up my interest in telescope technology, but in spite of this I learned much from this book.

It starts from the very first known telescopes and progresses from the large refractors to the very large reflectors. It of course discusses the one-time world's greatest optical giants on Mounts Wilson and Palomar, and then progresses to modern computer-aligned mirrors and adaptive optics. The innovations of Nelson and Angel are discussed. Interferometry is introduced in an understandable way. As each specific instrument is introduced, the need for an even larger one is recognised. The problems that arise from making larger and larger telescope optics and mounts are discussed and we are told how they were overcome. Not all of the resulting telescopes were perfect, and these are described too. Zirker goes on to tell us about telescopes in space, both present day and those scheduled for the future.



The content is written in a way that is accessible to readers of almost every level. It has notes to each chapter which explain some of more technical detail if the reader wishes to go deeper. There is also a glossary of terms which is most useful.

I found very few typographical errors in the book. The ones I did note were unfortunately in the captions to diagrams, but these were not sufficient to cause confusion in meaning. One disappointment was that the book seems to have taken quite long to get to press; I found references to the time of writing to be around 2004.

John Zirker is the former director of the National Solar Observatory and has written three previous books on solar astronomy.

I enjoyed this book immensely and recommend it to anyone with an interest in how telescopes are built.

Tom Boles

Tom Boles is a former BAA President and a retired professional telescope maker.

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