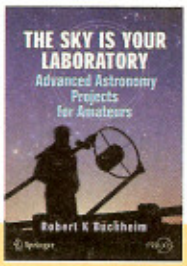
JENNIFER BIRRIEL

Stargazing with Purpose

As an amateur astronomer, you probably spend a considerable amount of time observing the heavens. As fulfilling as this is on a personal level, wouldn't it be great if you could also contribute meaningfully to the science of astronomy? Well, you can! But, you may ask, "What kinds of studies would be scientifically valuable, and to whom?"



The Sky Is Your Laboratory

Robert K. Buchheim (Springer, 2007). 229 pages. $34.95, paperbound.

ISBN-13 978-0-387-71822-4

Author and amateur astronomer Robert Buchheim answers these questions in his new book, *The Sky Is Your Laboratory*. He describes 18 projects, including visual observations of meteor showers, lunar- and asteroid-occultation timings, visual observations and CCD photometry of variable stars, asteroid astrometry, comet hunting, lunar meteor impacts, and much more.

Each project consists of a discussion of its scientific value, the essential scientific background you'll need, equipment requirements, observing procedures, data-reduction and analysis methods, and where and how to submit your results.

Buchheim gives amateurs the essentials to do real science, not simply science projects. He doesn't shy away from technical details or math. The book is amply illustrated with diagrams, and the text's tone is pleasantly conversational. The author has assured the accuracy of his content by enlisting the aid of nine professional and amateur astronomers with diverse backgrounds to review the chapters.

The projects suit a wide variety of equipment and interests, from naked-eye observations of meteor showers to CCD searches for supernovae. Buchheim even explores "data mining" projects, which would appeal to the armchair astronomer or the computer savvy.

Although Buchheim set out to write this book for amateurs, it should also be of interest to students and teachers who wish to pursue real science with equipment that may already be available on campus.

Jennifer Birriel is an associate professor of physics at Morehead State University in Kentucky.

But It Was Fun: The First Forty Years of Radio Astronomy at Green Bank

Felix J. Lockman, Frank D. Ghigo, and Dana S. Balser, eds. (National Radio Astronomy Observatory, 2007). 582 pages.
$60, cloth; ISBN-13 978-0-9700411-3-5
$25, paper; ISBN-13 978-0-9700411-2-8

If you enjoy reading about the history of research centers, here's a good one for your collection. Many scientific facilities have intriguing tales of existence — if anyone bothers to put all the stories together.

This compendium collects the accounts for selecting a site for and building a national radio observatory in Green Bank, West Virginia; a summary of significant cosmic observations; and many other historical details, from engineering problems to the search for extraterrestrial intelligence.

The black-and-white illustrations include interesting photographs of the original 300-foot dish's construction and of its collapse in 1988. But you'll also marvel at pictures of the accounting department and cafeteria.

To order, visit www.gb.nrao.edu/epo/itwasfun.html, or contact Anna Dickenson, Green Bank Science Center, NRAO, PO Box 2, Green Bank, WV 24944; 304-456-2151.

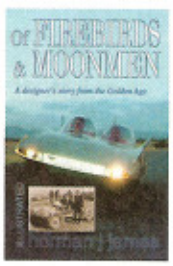
— *Stuart J. Goldman*

Of Firebirds and Moonmen

Norman J. James (Xlibris, 2007). 217 pages.
$31.99, cloth; ISBN-13 978-1-4257-7653-4
$21.99, paper; ISBN-13 978-1-4257-7659-6

Behind most homemade telescopes there's an amateur astronomer with a day job. Here's an autobiographical account by one of them. And in this case both the job and the telescope cross the line from the ordinary to the extraordinary.

Outside the world of astronomy, Norman James raises eyebrows as the man behind the design of the 1950s gas-turbine–powered Firebird III, one of the greatest concept cars ever produced by General Motors. He also helped design the Apollo lunar rover.



In the world of astronomy, however, James is remembered as the designer of a remarkable "spherical" telescope displayed at amateur gatherings in California and Vermont in the late '60s and early '70s (and covered in this magazine). Its design was a direct inspiration for Edmund Scientific's Astroscan telescope introduced in the '70s. It also inspired professional telescopes designed by Antoine Labeyrie for one of the pioneering efforts in stellar interferometry.

The book is a fun read, and many amateurs old enough to remember the early days of spaceflight will relate to the path James followed as a telescope maker and amateur astronomer. ✦

— *Dennis di Cicco*