STAR STUFF

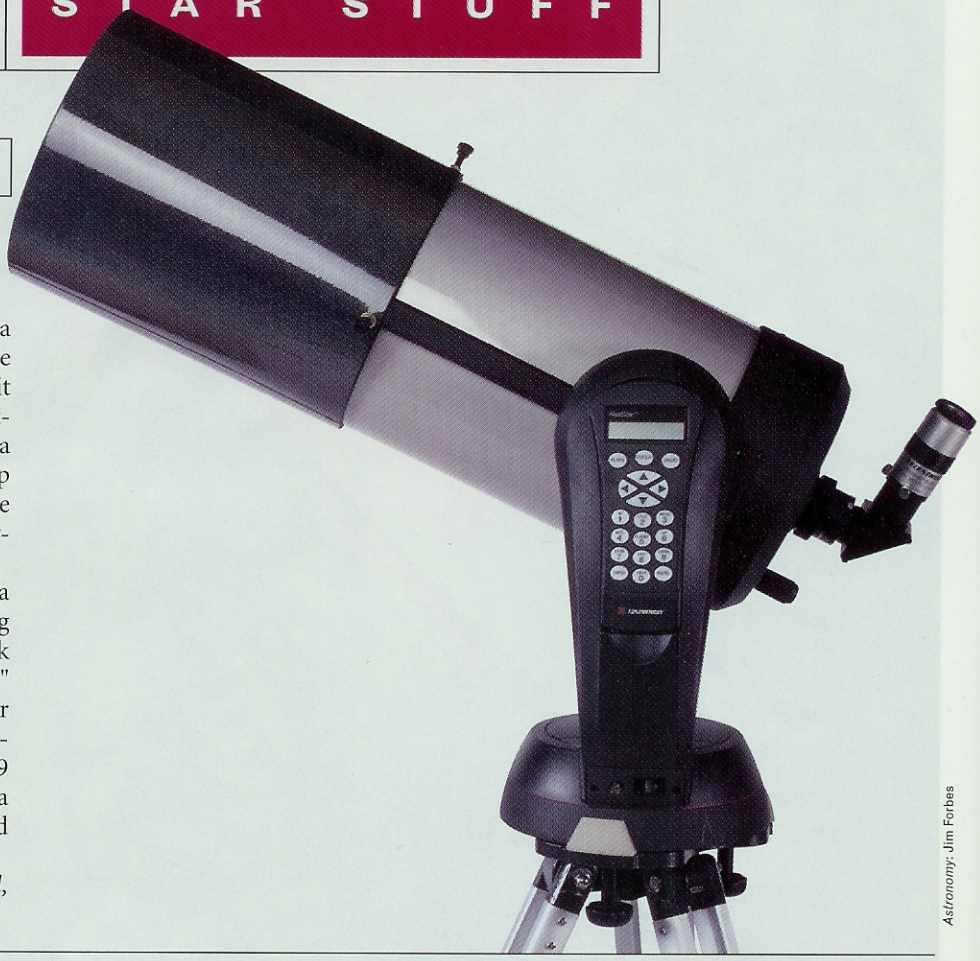
PRODUCTS

AstroZap Dew Shields

For those plagued by damp nights of observing — unavoidable during the summer months of North America — AstroZap offers a surprisingly large line of flexible dew shields made to fit many telescopes. Constructed of lightweight ABS plastic and coated with a special starfield finish that will dress up any scope for a special occasion, these shields will enable you to keep on observing through many a damp night.

These high-quality products include a felt-lined interior to prevent scattering of light, sewn Velcro strips for quick wrapping around the scope's rim, a 2" rubber trim, and easy storage either rolled or flat. Each has a 30-day money-back guarantee. Prices range from $19.99 for binocular dew shields to $88.50 for a shield to fit a 14-inch SCT; higher-priced aluminum shields are also available.

AstroZap, P. O. Box 502, Lakewood, OH 44107; website: www.astrozap.com.



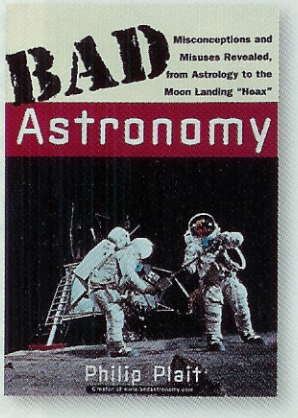
Astronomy: Jim Forbes

BOOKS

Bad Astronomy: Misconceptions and Misuses Revealed, from Astrology to the Moon Landing "Hoax"

Philip Plait, 277 pages, John Wiley and Sons, New York, 2002; ISBN 0–471–40976–6; paperback, $15.95.

Bad Astronomy . . . is good astronomy.



After Philip Plait earned his doctorate in astronomy, he became increasingly frustrated by media misinformation. For example, why do newscasters keep referring to Hubble's "giant lens" when that telescope has a mirror? Instead of turning to psychotherapy, Plait channeled his exasperation into the creation of a website, www.badastronomy.com. When the popular site accrued more than a million hits, Plait assembled the most comical, egregious, sinister, stupid, and common astronomy blunders into an entertaining new book named — not surprisingly — *Bad Astronomy*.

Among my favorite subjects is Hollywood's make-believe version of space. He explains why asteroid belts are not crowded places, and why even skilled spaceship pilots couldn't actually dodge incoming enemy lasers. "Laser beams travel at the speed of light, so there is literally no way to tell that one is headed your way."

Other juicy chapters target topics like UFOs, astrology, eggs balancing on the equinox, companies that claim to name stars after you, and the supposed Apollo hoax (some books and a TV documentary maintained that the moon missions were staged). Plait competently and enjoyably discredits such fallacies and scams.

But the book's title itself — *Bad Astronomy* — sets up its author for potential slings and arrows from astro-savvy "gotcha" critics. Woe to Plait if his paperback contains goof-ups of its own.

Well, first editions always have errors, but Plait's are happily few and generally minor. He says, for example, that passengers in a fast-turning car are pushed sideways by the centripetal effect when he means centrifugal, and he offers an incorrect explanation of why airplanes tilt their wings to turn.

Of greater concern is Plait's choice of some subjects. He devotes a chapter to debunk the idea that you can see stars in the daytime by looking up a chimney — but this misconception belongs to our parents' generation. Few under 40 have ever heard of that notion, therefore the need for its debunking is questionable. Such chapters may still serve historical purpose, however. In any case, whether a particular topic is personally appealing or just okay, *Bad Astronomy*'s agenda stays on the mark: Phil Plait is one of the true knights in the noble crusade against astro-babble.

Since backyard starwatchers often recognize astrofrauds, and since astrologers routinely ignore rational reasoning (few would deliberately subject themselves to Plait's relentless logic) — who is *Bad Astronomy* aimed to reach? Fortunately

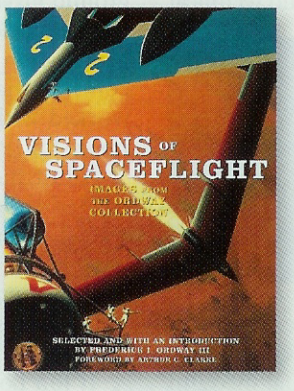
for the author, the book should appeal to a wide range of skeptics including amateur astronomers, especially beginners, who want to avoid common (and not so common) misconceptions.

Bad Astronomy is also an absolute "must" for public libraries, and for educators trying to help their students lift the persistent fog of pseudoscience. For the rest of us, Plait sprinkles the text with interesting factoids: "The moon appears the size of a dime located seven feet away." He also provides continuous chuckles about how our beloved and familiar celestial objects can come out of the mass media so humorously twisted and just plain wrong. This lively book — which belongs in the home library of every skeptical thinker — convincingly proves that a myth is as good as a smile. — *Bob Berman writes the Strange Universe column for* Astronomy.

Visions of Spaceflight: Images from the Ordway Collection

Frederick I. Ordway III, 176 pages, Four Walls Eight Windows, New York; ISBN 1–568–58181–5; hardcover, $49.95.

Long before manned voyages to the moon and the first artificial satellites, Frederick Ordway was fascinated by space travel. For many generations, dreams of leaving Earth were relegated to a few illustrated books and the imagination. With 20th-century technology, these visions were translated onto the covers of science fiction magazines, Hollywood movies, and eventually, reality — for the most part.



In *Visions of Spaceflight*, Ordway shares some of the finest images of space travel from his personal world-class collection of books, prints, photographs, and paintings he has amassed over a lifetime. The truly delightful artwork of astronautics and rocketry, both real and imagined, span more than 500 years to the eve of the space age; many are reproduced from original drawings and etchings. This large format volume features hundreds of black-and-white and glossy color photos of fantastic space vehicles of all shapes and sizes cooked up by scientists, dreamers, and true pioneers of spaceflight. Ordway himself says that these pieces "helped inspire and pave the way to the space triumphs of the later half of the 20th century."

Arthur C. Clarke provides a brief foreword, while Ordway recounts his amazing collecting quest in an introductory chapter. Here readers learn that the author's most prized acquisition is an early 17th-century British semiscientific discourse on the probability of the moon being habitable.

Ordway became enchanted with space travel at a young age, collecting space fiction books and pulp magazines of the 1930s and 1940s. He credits well-known space industry pioneers like Willy Ley and Frederick Durant as major influences on his career and passion. As an award-winning author, Ordway collaborated with the legendary rocket scientist Werner von Braun on several rocketry books during the early days of the U.S. space program.

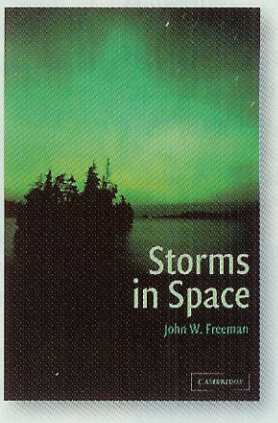
From our perspective, most of the paintings are considered dated; however, the winged chariots and hot-air balloons gliding up to the heavens provide a wonderful glimpse into the romantic fantasies of visionaries of centuries past. A section devoted to the artwork featured in *Collier's* magazine during the 1950s rules as a nostalgic highlight. This series on the conquest of space anticipated technological achievements of space science and influenced young minds to pursue careers in space.

Anyone interested in antiquarian aerospace art will thoroughly enjoy this one-of-a-kind anthology. Although our scientific knowledge has overtaken most of the quaint visions, readers are provided a fascinating glimpse at the evolution of the idea of space travel through the ages. — *Andrew S. Fazekas*

Storms in Space

John W. Freeman, 192 pages, Cambridge University Press, New York, 2001; ISBN 0521660386; hardcover, $28.

During my 24 years in weather forecasting and television weathercasting, many profound changes have occurred to make forecasting Earth's weather more accurate. Space weather forecasters, by contrast, are only beginning their dreams of forecasting solar radiation and its effect on our climate accurately. After reading this engaging book I've come to have great empathy for these pioneering spirits.



John Freeman takes an exceptional approach to explaining a very technical subject by using an analogy between forecasting solar particle streams and forecasting Earth weather. While humans can easily see Earth's weather on a daily basis, the bombardment of solar energy into Earth's atmosphere goes unnoticed by nearly everyone. Only after news articles chronicling lost satellites or disruptions of communications can we appreciate the value of knowing when normal incoming radiation creates a devastating storm.

The author of *Storms in Space* smoothly accomplishes descriptions of the effects of space weather by relating stories of pilots losing their GPS navigation, NORAD losing track of 75 satellites orbiting Earth, weather satellites losing hours of data, and cable television outages through broken uplinks. He shows the danger of particle bombardments to astronauts in and away from their space shuttles or stations.

Freeman also describes how weather forecasters have come a long way in the past few decades, aided by thousands of observational data sources, satellite technologies, and supercomputer modeling. Imagine a space storm forecaster attempting to create a prediction with only a few sensors in space, no visible pictures of the incoming "storm" of protons and electrons, and no computer models for future calculations. Freeman intelligently explains not only the importance of this information to our lives, but also where the science community is in terms of space weather forecasting.

This work manages to employ easy illustrations and examples, avoiding most complex mathematics. While average readers will enjoy this book, a solid foundation in science will make it more enjoyable. From this book, I gained a new understanding of the upper atmosphere, especially the magnetosphere, ionosphere, and aurorae. I also gained a curiosity for the future of space forecasting, something that we will all hear more about in the coming years. — *John Malan is a veteran meteorologist with WTMJ TV, Milwaukee's NBC affiliate.*