



## The Cambridge Encyclopedia of Amateur Astronomy

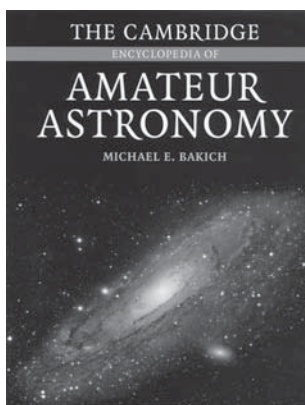
by Michael E. Bakich

**Cambridge University Press, 2003. ISBN 0-521-81298-4. Pp xii + 342 (hbk), £35.00.**

This book was totally different from that which your reviewer expected from the title. The term 'Encyclopedia' may conjure up a vision of an exhaustive, dull, alphabetical list of topics, but this book is far more readable than that. The author has already written two other Cambridge books, on Constellations and Planets, and is described as an astronomy lecturer and eclipse tour guide. He is certainly familiar with the world of amateur astronomy and this book very much captures the modern essence of the hobby, especially the telescope, equipment and modern observing aspects. A more accurate description of the book would perhaps be 'A comprehensive introduction to the hobby of amateur astronomy, at the start of the 21st century'. Despite being a Cambridge publication, published and printed in the UK, the book has a heavy United States bias and the overall flavour is distinctly 'Sky and Telescope' / US star party.

This is not a book which the advanced observer will feel is an essential acquisition, but it is a very potent, hard to put down, comprehensive introduction for the beginner. The layout of tables, facts and helpful illustrations is very pleasing to the eye, in keeping with other modern Cambridge astronomy books.

The book is divided into seven chapters covering, in this order: the basics (positional



astronomy and time etc.), equipment, observing methods, observing tips, sources of information, the solar system and deep sky/variable stars. Following the seven chapters are eighteen very useful appendices covering mainly planetary data but including information on the constellations, the thirty brightest stars and Messier and Caldwell objects.

I rarely find anything in a modern astronomy book that makes me stop dead in my tracks and mutter 'well, I've never seen one of those before'. But this book, with its many attention-grabbing photographs, held quite a few. For example, on page 75, there is a picture of the 'CosmicOne SCT Cooler', a device you insert in the eyepiece end of a Schmidt-Cassegrain, to cool it down. This was a new one on me! Similarly, on pages 232 and 233, the pictures of the El Paso fireball detection camera (a video camera staring at one of those alleyway 'blind-spot' fish-eye mirrors) had me

thinking 'Hmm, I could build one of those myself'.

This book is especially thorough in its coverage of the solar system, but a revised version would benefit from a section on planetary webcam imaging, which has revolutionised the hobby in the last year and superseded video work. Strangely, the lunar occultation section lives within the Deep Sky chapter, presumably as these events involve mainly stellar objects: it feels distinctly out-of-place.

Not everything Bakich says will go down easily with advanced observers. For example, on page 108, the comment 'the days of obtaining magnitudes of variable stars through visual observations are nearly at an end' could cause a riot at a BAA VSS meeting. Nevertheless, the book's easy-going style and excellent illustrations certainly gripped my attention for five cloudy nights in October and there are very few books, outside Stephen King novels, that can manage that.

### Martin Moberley

*Martin is a compulsive CCD imager of anything new and spectacular in the night sky and has never been able to kick the habit. He presents the monthly 'Sky Notes' at the BAA's London meetings.*

## The Smithsonian Book of Mars

by Joseph M. Boyce

**Smithsonian Institution Press, 2002. ISBN 1-58834-074-0. Pp xiv + 321, £26.95 (hbk.)**

Many 'popular' books about Mars are superficial in their treatment. The present text, happily, is not, even if it is aimed at a broad

audience. It is also a timely book. As its author notes, it can truly be said that the 'second great era' of martian exploration has begun. Joseph Boyce is well-placed to have written



this book, having been intimately involved in the NASA Mars programme for nearly two decades. I personally found his text very useful in bringing me up to date with current thinking about the martian interior and crust, areas of Mars research I have tended to neglect. Boyce writes with an excellent sense of perspective. Mars is reviewed historically in an introductory overview, and then examined from the centre outwards. The text ends with a look at future exploration, though Europe's first Mars probe (*Mars Express*, with its *Beagle 2*

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lander) receives only a brief mention. *The Smithsonian Book of Mars* is well illustrated (though more pictures might be given a scale) and printed on quality paper. It contains many helpful figures and tables, a glossary and a short 'further reading' list.

Boyce's style is clear and direct. Mostly it is analytical and descriptive, but there are flashes of unexpected humour. There are also some errors of fact, some unimportant typos, and a few odd grammatical constructions. On page 185 it would have been more accurate to have written that the polar hoods clear in late winter. The author often refers to 'global' dust storms when he really should be using the accepted term, 'planet-encircling'. The HST images on page 2 are reproduced at much too small a scale to do them justice, perhaps deliberately playing down the role of Earth-based imaging. On page 18, Huygens did not truly 'map' Mars; on page 27 'Higgins' should be 'Huggins', and on pages 26–27 the author neglects to mention that at least in the USA the 'canal controversy' was far from dead after 1909, even lingering into the 1960s upon the Rand Corporation's 'official' Mars charts prepared for NASA. But taken in context these are rather small criticisms.

I recommend Joseph Boyce's book without hesitation to anyone interested in the latest images and interpretations of the Red Planet. He is to be warmly congratulated upon a job well done, and I hope the book gains a wide readership.

**Richard McKim**

*Richard McKim has reported BAA observations of Mars since the 1979–80 apparition. He has written extensively about the martian dust storms and about the history of Mars observation. He directs the Association's Mars Section from his home in Northamptonshire.*

## New worlds in the cosmos – the discovery of exoplanets

by Michel Mayor & Pierre-Yves Frei, translated by Boud Roukema

**Cambridge University Press, 2003. ISBN 0-521-81207-0. Pp xii + 248 (hbk), £18.95.**

This is the book I wanted to read: how Mayor and Queloz discovered 51 Pegasi B – the first of the exoplanets. I found out by page 20. It is fundamentally Michel Mayor's book, a lot of it being in the first person. The start is a touch slow, with preface, acknowledgments and some unnecessary scene-setting, then the pace quickens. There are occasional lapses: 'calibrating... instrument to eliminate... artefacts' – I know this means 'making sure it worked properly', but would a general reader? Mostly I liked the narrative, and the generosity with which the contributions of others was recorded.

There are quite a lot of scholarly quotes. As the book is a translation, there are some odd phrases: 'retrograde hesitations' of planets for example. More seriously, Herschel 'decided to construct a refracting Newtonian telescope': this should of course be a reflecting telescope, as the succeeding sentences show clearly. I was sur-

prised to see Chandrasekhar's limit quoted at 1.5 solar masses and stellar remnants described as neutron stars below that and black holes above. The Sigma Orionis cluster contains 'no star... older than 8 million years' but in the next paragraph it is '...5 million years old at the most'.

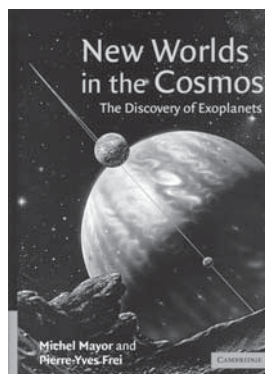
In chapter 2, you reach a brief, selective survey of astronomy from Greek to modern times. Although virtually all astronomical writers include this, I question its relevance in this instance. In contrast, the story of the finding of the modern planets, Uranus, Neptune and Pluto does give a feel for the search.

Most of the book describes the progress of the planet hunters, notably Marcy and Butler, as they find massive planets revolving unexpectedly close to stars. The discoveries of others get the same enthusiasm as the initial one by Mayor and Queloz. Some observations were not confirmed and the authors simply state this. They cover pulsar planets and brown dwarfs as well, and very informatively too.

The general reader might need to refer to the glossary (an index would be useful) but the cheerful style makes this a very approachable book. I am glad to have read it.

**Roger O'Brien**

*Roger O'Brien teaches astronomy and cosmology (mostly for the Open University) and even manages a bit of observing from time to time.*



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