



CAMBRIDGE

# Journey into the night sky with Cambridge

[www.cambridge.org/astronomy](http://www.cambridge.org/astronomy)

CAMBRIDGE  
UNIVERSITY PRESS

## HIGHLIGHT

**NEW**

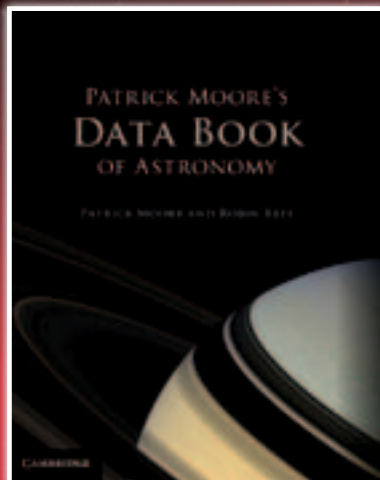
### Patrick Moore's Data Book of Astronomy

*Second edition*

Patrick Moore

*British Astronomical Association, London*

and Robin Rees *Canopus Publishing Limited*



Packed with up-to-date astronomical data about the Solar System, our Galaxy and the wider Universe, this is a one-stop reference for astronomers of all levels. With hundreds of data tables and a comprehensive star catalogue, it is destined to become the standard reference for everyone interested in astronomy.

**'... will be an invaluable reference work for serious observers – but it is equally suitable for armchair browsers, and indeed for anyone who is curious about what lies beyond the Earth.'**

**Martin Rees**, Professor of Cosmology and Astrophysics,  
University of Cambridge

2011 246 x 189 mm 586pp

35 b/w illus. 48 maps 270 tables

978-0-521-89935-2 Hardback £35.00

[www.cambridge.org/9780521899352](http://www.cambridge.org/9780521899352)

## Stargazing Basics

*Getting Started in Recreational Astronomy*

Paul E. Kinzer



All you need to know to get started in astronomy, from observing the night sky to purchasing binoculars and telescopes.

2008 247 x 174 mm 160pp

65 b/w illus.

978-0-521-72859-1

Paperback £13.99

**eBook available**

[www.cambridge.org/9780521728591](http://www.cambridge.org/9780521728591)

**BESTSELLER**

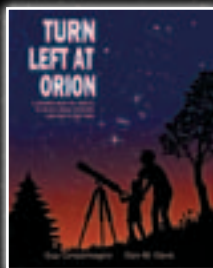
### Turn Left at Orion

*A Hundred Night Sky Objects to See in a Small Telescope – and How to Find Them*

*Third edition*

Guy Consolmagno

and Dan M. Davis



This fascinating guide provides all the information you need to observe the Moon, the planets and a whole host of celestial objects. Large format diagrams show these objects exactly as they appear in a small telescope and for each object there is

information on the current state of our astronomical knowledge. Unlike many guides to the night sky, this book is specifically written for observers using small telescopes. Clear and easy-to-use, this fascinating book will appeal to skywatchers of all ages and backgrounds.

2000 276 x 219 mm 224pp 279 b/w illus. 23 tables

978-0-521-78190-9 Hardback £23.99

**eBook available**

[www.cambridge.org/9780521781909](http://www.cambridge.org/9780521781909)

# Observing the Night Sky with Binoculars

**A Simple Guide to the Heavens**

Stephen James O'Meara



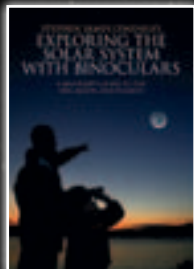
Useful guide and reference for amateur astronomers exploring the night sky through handheld binoculars.

2008 297 x 210 mm 168pp  
225 b/w illus.  
978-0-521-72170-7  
Paperback £20.99

[www.cambridge.org/9780521721707](http://www.cambridge.org/9780521721707)

# Exploring the Solar System with Binoculars

**A Beginner's Guide to the Sun, Moon, and Planets**



Stephen James O'Meara

Stephen James O'Meara shows readers how to observe our Solar System's wonders with ease and clarity, using nothing more than the unaided eye and inexpensive, handheld binoculars. This unique observing guide

for amateur astronomers covers lunar and solar eclipses, sunspots, the Moon's craters, the planets, meteors, comets, and more.

2010 297 x 210 mm 166pp 200 b/w illus.  
978-0-521-74128-6 Paperback £19.99

[www.cambridge.org/9780521741286](http://www.cambridge.org/9780521741286)

## HIGHLIGHT

**NEW**

# Cosmic Challenge

**The Ultimate Observing List for Amateurs**

Philip S. Harrington

Dowling College, New York



Listing over 500 sky targets, this guide will test novice astronomers and advanced veterans alike. Its unique mix of Solar System and deep-sky targets contains challenges suitable for the naked eye, binoculars, and backyard telescopes. Each target object has a difficulty rating, a realistic illustration, and a detailed finder chart.

**'Phil Harrington is one of the rare individuals who knows the sky and can write about it in an engaging manner. *Cosmic Challenge* features nearly 200 celestial hunts that will challenge you no matter how many days or years you've logged looking through a telescope. In writing this book, Harrington has produced a work of enduring value, one that should be on every observer's shelf.'**

**Michael E. Bakich**  
Senior Editor, *Astronomy* magazine

2010 246 x 189 mm 488pp 333 b/w illus.  
978-0-521-89936-9 Hardback £27.50

**eBook available**

[www.cambridge.org/9780521899369](http://www.cambridge.org/9780521899369)

## HIGHLIGHT

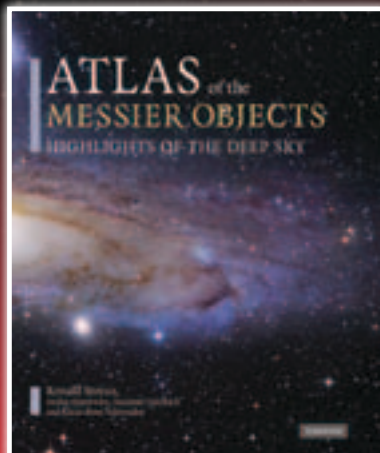
### Atlas of the Messier Objects

Highlights of the Deep Sky

Ronald Stoyan, Stefan Binnewies

and Susanne Friedrich

Translated by Klaus-Peter Schroeder



This stunning atlas presents a complete account of each of the 110 Messier objects, with information on their history, astrophysical significance, and detailed observational descriptions. Illustrated with the finest color astrophotos, historical sketches and deep sky drawings – this is a must-have reference for observers of all ages and abilities!

**'I received your book and must say that it is absolutely beautiful! You have created an amazing review of the Messier objects. Congratulations on a breathtaking publication!'**

**Phil Harrington**, author of *Star Ware* and *Touring the Universe through Binoculars*

2008 310 x 245 mm 370pp 200 b/w illus. 180 colour illus. 50 tables

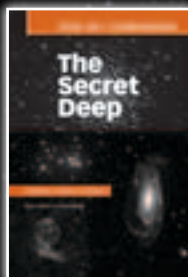
978-0-521-89554-5 Hardback £37.00

**eBook available**

[www.cambridge.org/9780521895545](http://www.cambridge.org/9780521895545)

### Deep-Sky Companions: The Secret Deep

Stephen James O'Meara



Stephen James O'Meara presents 109 new objects for stargazers to observe. Each object is accompanied by beautiful photographs and sketches, original finder charts, visual histories and up-to-date astrophysical information to enrich the observing experience.

Featuring many exceptional objects, this is an essential guide for any deep-sky observer.

2011 254 x 174 mm 400pp 435 b/w illus.

978-0-521-19876-9 Hardback c. £29.00

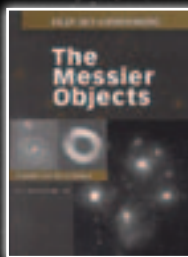
**Publication April 2011**

[www.cambridge.org/9780521198769](http://www.cambridge.org/9780521198769)

## BESTSELLER

### Deep-Sky Companions: The Messier Objects

Stephen James O'Meara



The Messier Guide for the modern age. Exquisite and highly detailed drawings made from the darkest skies on Earth are combined with a thoroughly modern text in this ultimate field guide to the finest galaxies, clusters and nebulae.

1999 246 x 189 mm 318pp 330 b/w illus.

978-0-521-55332-2 Hardback £29.00

[www.cambridge.org/9780521553322](http://www.cambridge.org/9780521553322)

# Deep-Sky Companions: Hidden Treasures

Stephen James O'Meara



This new and exciting observing guide spotlights an original selection of 109 deep-sky objects that will appeal to sky-watchers worldwide. His 'hidden treasures' include a wonderful assortment of galaxies, open clusters, planetary nebulae and more, all of which have been

carefully chosen based on their popularity and ease of observing. All of the objects are visible in a 4-inch telescope under dark skies.

2007 254 x 174 mm 602pp 120 b/w illus. 110 maps  
978-0-521-83704-0 Hardback £29.00

**eBook available**

[www.cambridge.org/9780521837040](http://www.cambridge.org/9780521837040)

## BESTSELLER

# The Monthly Sky Guide

*Eighth edition*

Ian Ridpath

Illustrated by Wil Tirion



This classic beginner's guide to the night sky has been updated with planet positions and forthcoming eclipses, a guide to observing the Moon, comprehensive Moon maps with labelled features, and information on observing the four brightest planets: Venus, Mars, Jupiter and

Saturn. This eighth edition of Ian Ridpath and Wil Tirion's famous guide will appeal to astronomers of all ages. The 50 clear and easy-to-use maps provide a simple introduction to the skies of the northern hemisphere. Most of the sights are visible to the naked eye, and all are within reach of binoculars or a small telescope.

2009 297 x 210 mm 72pp  
978-0-521-13369-2 Paperback £10.99

[www.cambridge.org/9780521133692](http://www.cambridge.org/9780521133692)

## HIGHLIGHT

### NEW EDITION

# Practical Astronomy with your Calculator or Spreadsheet

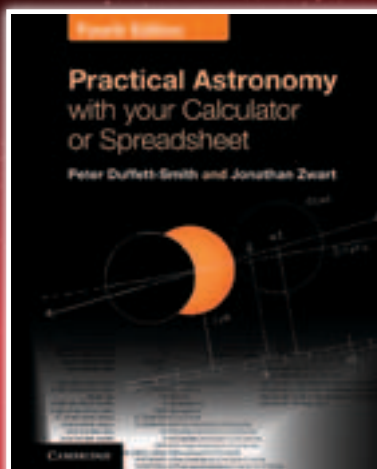
*Fourth edition*

Peter Duffett-Smith

*University of Cambridge*

and Jonathan Zwart

*Columbia University, New York*



Updated and extended, the fourth edition of this highly regarded book is ideal for those who wish to solve various practical and recreational problems in astronomy using a scientific calculator or spreadsheet. With clear, easy-to-follow instructions, shown alongside worked examples, this handbook can be enjoyed by anyone interested in astronomy.

2011 246 x 189 mm 304pp 110 b/w illus. 10 tables  
978-0-521-14654-8 Paperback c. £24.99

**Publication April 2011**

[www.cambridge.org/9780521146548](http://www.cambridge.org/9780521146548)

## HIGHLIGHT

**NEW**

### Eye and Telescope v3.0

**The Deep Sky Observing Planner**

Software developed by Thomas Pfleger



This is the only software that can predict how an object will look through your telescope. It uses a comprehensive database to find suitable candidates for observing in a blink of an eye. Clearly labelled star maps can be easily rotated to match the view in your eye-piece.

**'While it's true that sky map software is abundant in the US, *Eye and Telescope* offers something unique – an attempt at defining not only the visibility of the target, but its actual appearance to the end user through their telescope, and from their site. This is both a time and frustration saving utility, as well as one that allows an observer to locate objects at the edge of their resources.'**

Tom Trusock, *CloudyNights.com*

2011

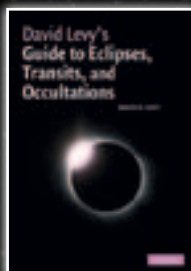
978-0-521-15115-3 DVD-ROM c. £45.00

Publication April 2011

[www.cambridge.org/9780521151153](http://www.cambridge.org/9780521151153)

## David Levy's Guide to Eclipses, Transits, and Occultations

David H. Levy



David Levy inspires readers to experience the wonder of eclipses for themselves in this simple guide for beginners to practised observers. It gives step-by-step instructions on how to observe and photograph eclipses, includes chapters on occultations and the

transits of Mercury and Venus, and tables of future eclipses.

2010 247 x 174 mm 184pp 55 b/w illus.

978-0-521-16551-8 Paperback £18.99

**eBook available**

[www.cambridge.org/9780521165518](http://www.cambridge.org/9780521165518)

**BESTSELLER**

## Digital SLR Astrophotography

Michael A. Covington



In this concise guide, experienced astrophotography expert Michael Covington outlines the simple, enduring basics that will enable you to get started, and help you get the most from your equipment. He covers

a wide selection of equipment, simple and advanced projects, technical considerations and image processing techniques. This guide is ideal for astrophotographers who wish to develop their skills using DSLR cameras and as a friendly introduction to amateur astronomers or photographers curious about photographing the night sky.

2007 246 x 189 mm 234pp 140 b/w illus. 5 tables

978-0-521-70081-8 Paperback £24.99

**eBook available**

[www.cambridge.org/9780521700818](http://www.cambridge.org/9780521700818)

# The Cambridge Atlas of Herschel Objects

James Mullaney

Illustrated by Wil Tirion



The first star atlas devoted to the Herschel objects, it displays over 2500 of the most visually-attractive star clusters, nebulae and galaxies. Spiral bound and printed in red-light friendly colors for use at a telescope, this is a must-have for stargazers

who want to explore these fascinating objects.

2011 303 x 228 mm 190pp 32 colour illus.  
978-0-521-13817-8 Spiral bound £27.99

**eBook available**

[www.cambridge.org/9780521138178](http://www.cambridge.org/9780521138178)

# The Cambridge Double Star Atlas

James Mullaney

Illustrated by Wil Tirion



This magnificent atlas contains the most attractive and interesting double and multiple stars for viewing with binoculars and telescopes. It is a must-have for stargazers who want to explore these fascinating

objects. It plots over 2000 selected pairs of stars, each labeled with discoverer, catalog, and/or observatory designations. A superb introduction to this important class of celestial objects, it provides an easy-to-use 'celestial roadmap' to locate and identify double and multiple stars.

2009 303 x 228 mm 154pp  
978-0-521-49343-7 Spiral bound £28.99

**eBook available**

[www.cambridge.org/9780521493437](http://www.cambridge.org/9780521493437)

## HIGHLIGHT

**NEW**

# The Complete Guide to the Herschel Objects

Sir William Herschel's Star Clusters,  
Nebulae and Galaxies

Mark Bratton *Webb Deep-Sky Society*



Providing a complete re-examination of Herschel's entire catalogue, this is the most accurate and up-to-date reference of its kind. With object data for every one of Herschel's discoveries and hundreds of intriguing photos, this unique text is a must-have for amateur astronomers seeking new and exciting observing challenges.

**Contents:** Introduction; 11. The telescope maker; 2. The deep sky before Herschel; 3. Surveyor of the skies; 4. The Herschel catalogue; General references; Index.

2011 246 x 189 mm 530pp 600 b/w illus.  
978-0-521-76892-4 Hardback c. £45.00

**Publication July 2011**

[www.cambridge.org/9780521768924](http://www.cambridge.org/9780521768924)

## HIGHLIGHT

**NEW**

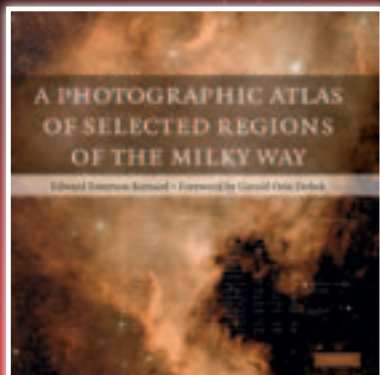
### A Photographic Atlas of Selected Regions of the Milky Way

Edward Emerson Barnard

*Yerkes Observatory, Wisconsin*

Foreword by Gerald Orin Dobek

*Northwestern Michigan College*



Reproduced in print for the first time, this book combines both volumes of Barnard's *Photographic Atlas of Selected Regions of the Milky Way*. It directly replicates Barnard's text, with high resolution images of the original photographic plates, and a pull-out of the 50 plates combined in a panorama.

**'One of the greatest astronomy books of all time is back - and it's better than the original... This is a must for every astrophysics department, every library, and every astronomer who loves the sky the romance of the subject, and its magnificent history.'**

**Dr Graeme White, James Cook University**

2011 270 x 270 mm 376pp 50 b/w illus.

978-0-521-19143-2 Hardback £75.00

[www.cambridge.org/9780521191432](http://www.cambridge.org/9780521191432)

### Stars and their Spectra

**An Introduction to the Spectral Sequence**

*Second edition*

James B. Kaler



Revised and expanded, the second edition of this popular book provides a thorough introduction to stellar spectra. Each chapter explores a different star type, including new classes L and T. With modern digital spectra and updates from two decades of astronomical discoveries,

it is invaluable for amateur astronomers and students.

2011 247 x 174 mm 422pp 229 b/w illus. 18 tables

978-0-521-89954-3 Hardback c. £30.00

**Publication August 2011**

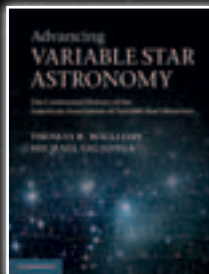
[www.cambridge.org/9780521899543](http://www.cambridge.org/9780521899543)

### Advancing Variable Star Astronomy

**The Centennial History of the American Association of Variable Star Observers**

Thomas R. Williams

and Michael Saladyga



Marking the AAVSO's centennial year, this timely book presents an authoritative and accurate history of this important association. Moving chronologically through five eras of variable star astronomy, the authors discuss the evolution of the

AAVSO's structure and purpose, focusing on the thousands of individuals who have made its progress possible.

2011 246 x 189 mm 432pp 128 b/w illus.

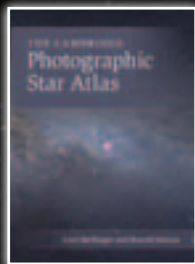
978-0-521-51912-0 Hardback c. £60.00

**Publication June 2011**

[www.cambridge.org/9780521519120](http://www.cambridge.org/9780521519120)

# The Cambridge Photographic Star Atlas

Axel Mellinger  
and Ronald Stoyan



Providing a mosaic of the entire sky, this unique atlas is unparalleled in detail and completeness, making it indispensable for visual observers and astrophotographers. Each double-page spread shows large-scale photographic images with corresponding charts

highlighting and naming over 1500 deep-sky objects and 2500 stars.

2011 176pp 164 colour illus.  
978-1-107-01346-9 Hardback c. £30.00

**Publication June 2011**

[www.cambridge.org/9781107013469](http://www.cambridge.org/9781107013469)

## NEW EDITION

# The Cambridge Star Atlas

*Fourth edition*

Wil Tirion



This classic star atlas is ideal for both beginning astronomers and more experienced observers worldwide. As well as showing the stars, clusters and galaxies visible with binoculars or a small telescope, this fourth edition contains a new Moon map and

enhanced charts.

2011 303 x 228 mm 96pp 32 colour illus.  
978-0-521-17363-6 Spiral bound £23.99

[www.cambridge.org/9780521173636](http://www.cambridge.org/9780521173636)

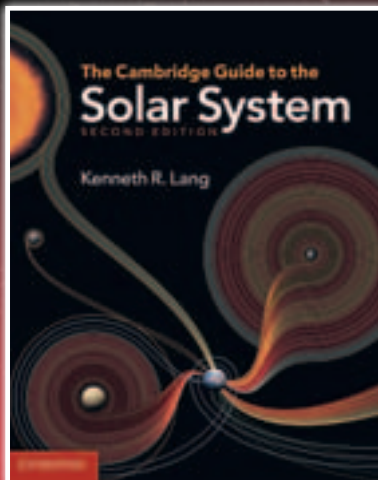
## HIGHLIGHT

### NEW EDITION

# The Cambridge Guide to the Solar System

*Second edition*

Kenneth R. Lang *Tufts University, Massachusetts*



Richly illustrated with full-colour images, this second edition of a classic reference provides an up-to-date description of the planets, their moons, and recent exoplanet discoveries. Written at an introductory level appropriate for high-school and undergraduate students, it provides fresh insights that appeal to anyone with an interest in planetary science.

**'Journeys deep into space have revealed dozens of distinctive worlds of unexpected diversity. Ken Lang presents a richly illustrated and remarkably thorough guide to the new view of the Solar System that has emerged, a view that beckons us on further journeys of discovery.'**

**Edward Stone, NASA Jet Propulsion Laboratory**

2011 276 x 219 mm 502pp 200 b/w illus. 225 colour illus. 62 tables  
978-0-521-19857-8 Hardback £35.00

[www.cambridge.org/9780521198578](http://www.cambridge.org/9780521198578)

## HIGHLIGHT

### An Introduction to the Solar System

*Second edition*

Edited by David A. Rothery

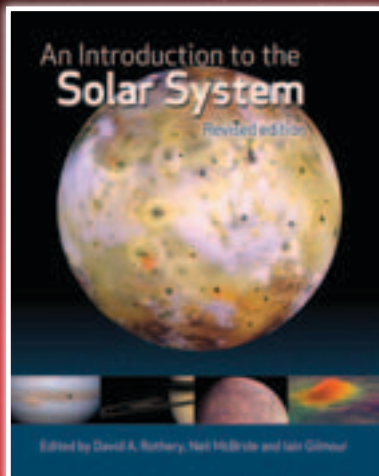
*The Open University, Milton Keynes*

Neil McBride

*The Open University, Milton Keynes*

and Iain Gilmour

*The Open University, Milton Keynes*



Presenting a fascinating description of the bodies in the Solar System and their origin and evolution, this new edition has been updated to reflect current knowledge and contains several new figures. There are questions and answers throughout the text, exercises with full solutions, and additional resources available online.

**Contents:** Introduction; 1. A tour of the solar system; 2. The internal structure of the terrestrial planets; 3. Planetary volcanism – Ultima Thule?; 4. Planetary surface processes; 5. Atmospheres of terrestrial planets; 6. The giant planets; 7. Minor bodies of the solar system; 8. The origin of the solar system; 9. Meteorites: a record of formation; Answers and comments; Appendices; Glossary; Further reading; Acknowledgements; Figure references; Index.

2011 263 x 210 mm 424pp 328 colour illus. 96 exercises  
978-1-107-60092-8 Paperback £35.00

[www.cambridge.org/9781107600928](http://www.cambridge.org/9781107600928)

### A Question and Answer Guide to Astronomy

Pierre-Yves Bely

Carol Christian

and Jean-René Roy



Are we alone in the Universe? Was there anything before the Big Bang? Are there other universes? What are sunspots? What is a shooting star? Was there ever life on Mars? This book answers the fascinating questions that we have been

asking ourselves for hundreds of years. Using non-technical language, the authors summarise current astronomical knowledge, taking care to include the important underlying scientific principles. Plentiful colour illustrations, graphs and photographs lend further weight to their simple yet meticulously written explanations. An extensive bibliography allows you to pursue or recap on the subjects that rouse your particular interest. Dip in to discover and learn fascinating facts about our Solar System and the Universe beyond!

**Contents:** 1. Stars; 2. The Solar System; 3. The Earth; 4. The Moon; 5. Celestial phenomena; 6. The Universe; 7. Life in the Universe; 8. History of astronomy; 9. Telescopes; 10. Amateur astronomy; Bibliography; References; Index.,  
2010 247 x 174 mm 294pp 66 b/w illus. 305 colour illus.  
978-0-521-18066-5 Paperback £19.99

**eBook available**

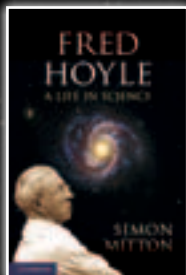
[www.cambridge.org/9780521180665](http://www.cambridge.org/9780521180665)

## NEW IN PAPERBACK

### Fred Hoyle

*A Life in Science*

Simon Mitton



The scientific life of Fred Hoyle (1915–2001) was truly unparalleled. During his career he wrote groundbreaking scientific papers and caused bitter disputes in the scientific community with his revolutionary theories. Written from personal accounts and interviews

with his contemporaries, this book gives valuable insights into Fred Hoyle's unforgettable life.

2011 234 x 156 mm 384pp 22 b/w illus.

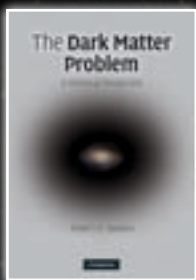
978-0-521-18947-7 Paperback £19.99

[www.cambridge.org/9780521189477](http://www.cambridge.org/9780521189477)

### The Dark Matter Problem

*A Historical Perspective*

Robert H. Sanders



Describing the development of dark matter theory, this book shows why it is now a central feature of extragalactic astronomy and cosmology. This fascinating overview will interest cosmologists, astronomers and particle physicists. Mathematics is kept to a minimum, so the

book can be understood by non-specialists.

2010 247 x 174 mm 214pp 71 b/w illus.

978-0-521-11301-4 Hardback £35.00

**eBook available**

[www.cambridge.org/9780521113014](http://www.cambridge.org/9780521113014)

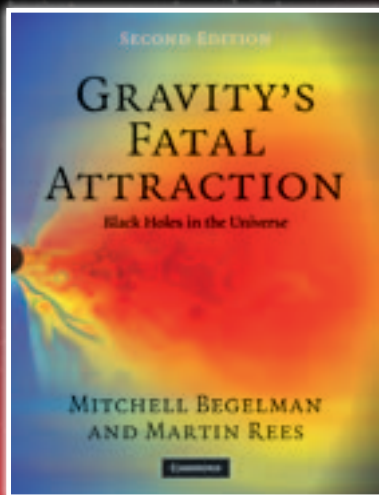
## HIGHLIGHT

### Gravity's Fatal Attraction

*Black Holes in the Universe*

*Second edition*

Mitchell Begelman and Martin Rees



Richly illustrated in colour, this book is suitable for introductory undergraduate courses, amateur astronomers, and all readers interested in astronomy and physics. It shows how black holes were discovered, and discusses current understanding of their role in cosmic evolution. This second edition covers new discoveries made in the past decade.

**'Lavishly illustrated and written with clarity and enthusiasm, this is a spectacular guided tour of our weird and wonderful universe in the safe hands of two of the world's greatest astrophysicists.'**

**Dr. Simon Singh,**

author of *Big Bang: The Origins of the Universe*

**Contents:** Introduction; 1. Gravity triumphant; 2. Stars and their fates; 3. Black holes in our backyard; 4. Galaxies and their nuclei; 5. Quasars and kin; 6. Jets; 7. Blasts from the past; 8. Black holes in hibernation; 9. Cosmic feedback; 10. Checking up on Einstein; 11. Through the horizon; Appendix: Gravity and cosmic dimensions Index.

2010 246 x 189 mm 312pp

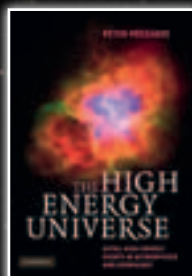
978-0-521-71793-9 Paperback £19.99

[www.cambridge.org/9780521717939](http://www.cambridge.org/9780521717939)

# The High Energy Universe

Ultra-High Energy Events in Astrophysics and Cosmology

Péter Mészáros



Written in a concise and accessible language, this book provides an overview of high energy, particle and gravitational astrophysics. It will be suitable for undergraduate and graduate students, as well as other readers interested in the subject. Colour versions

of a selection of the figures are available at [www.cambridge.org/9780521517003](http://www.cambridge.org/9780521517003).

2010 247 x 174 mm 222pp 73 b/w illus. 4 tables  
978-0-521-51700-3 Hardback £35.00

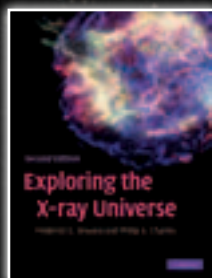
**eBook available**

[www.cambridge.org/9780521517003](http://www.cambridge.org/9780521517003)

# Exploring the X-ray Universe

Second edition

Frederick D. Seward and Philip A. Charles



Capturing the excitement and accomplishments of X-ray astronomy, this second edition now includes a broader range of astronomical phenomena and dramatic new results from the most powerful X-ray telescopes. Ideal

for undergraduate students, it is supported by over 300 figures, and more specialized technical points separated in boxes.

2010 246 x 189 mm 372pp 368 b/w illus. 43 colour illus.  
978-0-521-88483-9 Hardback £40.00

**eBook available**

[www.cambridge.org/9780521884839](http://www.cambridge.org/9780521884839)

# The Scientific Exploration of Mars

Fredric W. Taylor



What do we know about Mars? What remains to be understood? Is there evidence of life there? Will humans ever travel there? The dream of exploring Mars has been around since the early days of human civilization and still

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Barrie W. Jones



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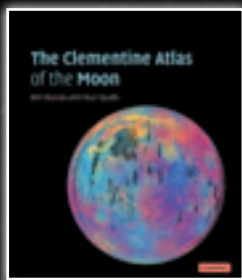
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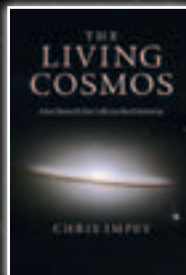
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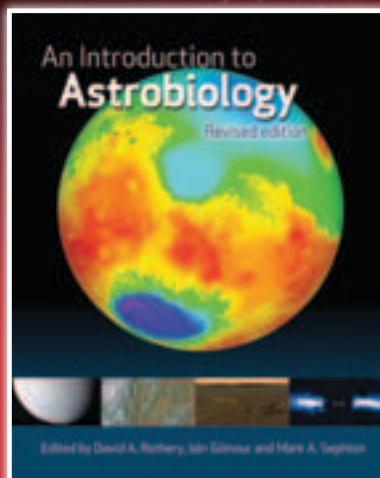
*The Open University, Milton Keynes*

**Iain Gilmour**

*The Open University, Milton Keynes*

**and Mark A. Sephton**

*Imperial College London*



Providing an introduction to the origin of life, the habitable environments in our Solar System and the search for exoplanets, this new edition has been updated to take in the latest developments. There are questions and answers throughout the text, exercises with full solutions, and additional resources available online.

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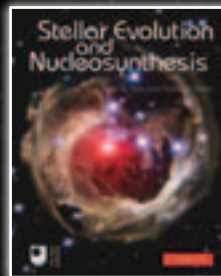
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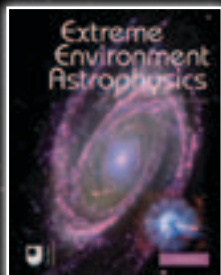
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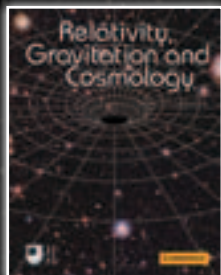
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## HIGHLIGHT

## Observational Cosmology

Stephen Serjeant

*The Open University, Milton Keynes*



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