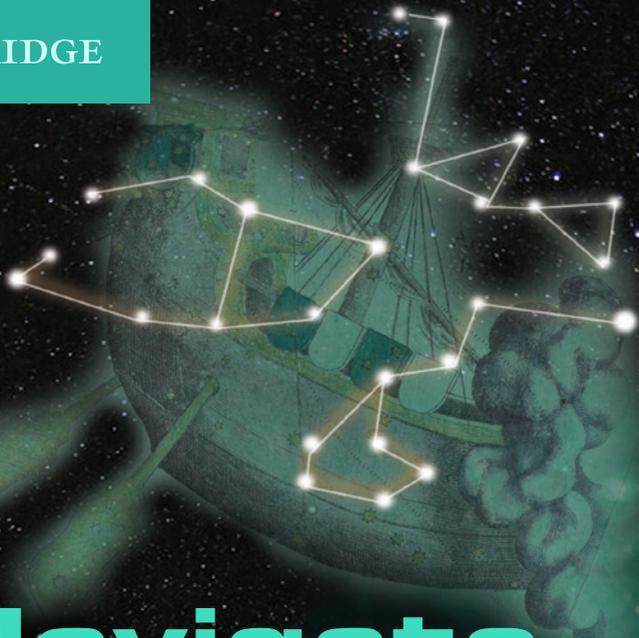


CAMBRIDGE



Navigate the night sky with Cambridge

see inside for details
of new and essential
astronomy books 

www.cambridge.org/astronomy

CAMBRIDGE
UNIVERSITY PRESS

HIGHLIGHT

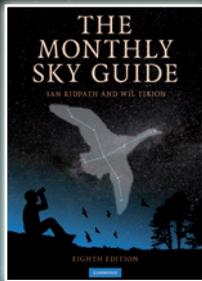
New Edition

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 up to the end of 2014, 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 book contains a chapter for every month, describing the prominent stars, constellations, star clusters, nebulae and galaxies that are visible. 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.

'For those who want to learn about the constellations and bright stars, this book is all that they'll need.'

Astronomy Now

'What adds greatly to the value of the Guide is the obvious enthusiasm of the authors and their ability to convey it.'

Journal of the British Astronomical Association

2009 72 Pages

978-0-521-13369-2

Paperback

£10.99

Stargazing Basics

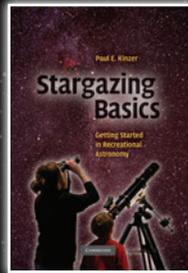
Getting Started in Recreational Astronomy

Paul E. Kinzer

How do I get started in astronomy?

Should I buy binoculars or a telescope?

What can I expect to see?



This wonderful informal guide to astronomy has all the information an absolute beginner needs to get started. It explains the basic techniques and equipment you need for exploring the night sky, from observing

with the naked eye to using binoculars and telescopes. It then takes you on a tour of the night sky, covering the Moon, Sun, stars, planets, and more. The book gives sound advice on purchasing affordable binoculars, telescopes, and accessories, and is illustrated with photos taken by the author, showing how objects in the sky actually look through modest amateur equipment. Whether you are a parent thinking of buying a telescope for your children, or a newcomer yourself, this book has all you need to know to take the first steps into the fascinating world of astronomy.

2008 247 x 175 mm 160 pages 65 b/w illus.

978-0-521-72859-1

Paperback

£12.99

'Stargazing Basics: Getting started in Recreational Astronomy presents a brief primer on the equipment used by amateur astronomers, its limitations and how to decide what (if any) new kit you should buy. The author is an amateur astronomer himself and clearly familiar with the challenge of selecting from the dizzying range of possibilities. He wisely avoids recommending particular models ... Instead, the book offers tips on telling flashy but poor-quality features from those that will enhance an evening's stargazing.'

physicsworld.com

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

Vatican Observatory, Vatican City

and Dan M. Davis

State University of New York, Stony Brook



A guidebook for amateur astronomers, *Turn Left at Orion* 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. Revised and updated, this new edition contains a chapter describing spectacular deep sky objects visible from the southern hemisphere, and tips on observing the upcoming transits of Venus. It also includes a discussion of Dobsonian telescopes, with hints on using personal computers and the internet as aids for planning an observing session. 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. No previous knowledge of astronomy is needed.

'This is a GREAT BOOK! ... unique, with easy, clear directions on how to find these celestial objects, the best conditions, and what you will see. Consolmagno and Davis do a terrific job.'

Colin Haig, *Event Horizon, Hamilton (Ontario) Amateur Astronomers Newsletter*

'No telescope owner should be without this classic (now updated) amateur astronomy manual.'

Jamie Love, *Science Explained*

2000 285 x 228 mm 224 pages

279 b/w illus. 23 tables

978-0-521-78190-9

Hardback

£22.99

A Walk through the Southern Sky

A Guide to Stars and Constellations and their Legends

Second edition

Milton Heifetz and Wil Tirion



This edition has been updated with additional mythology information, and a list of the planet positions up to 2016. The book is an ideal introduction to the Southern hemisphere's starry skies.

'You don't need a telescope to learn where the constellations are - this book tells you exactly how to find them simply by looking at the sky...you can impress your friends when you stumble out of the pub by pointing out what's where in the night sky.'

The Times

2007 245 x 190 mm 120 pages

5 b/w illus. 55 colour illus.

978-0-521-68945-8

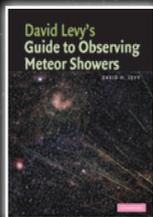
Paperback

£13.99

David Levy's Guide to Observing Meteor Showers

David H. Levy

Jarnac Observatory, Arizona



In this step-by-step guide, David Levy encourages readers to go outside and witness meteors and meteor showers for themselves. This is a perfect introduction for budding astronomers.

'Any necessary science is explained simply and in clearly understandable terms for both seasoned and budding astronomers.'

Spaceflight

'David Levy's Guide to Observing Meteor Showers clearly shows the author's enthusiasm for the subject, and will hopefully encourage new observers to get involved.'

Neil Bone, *Astronomy Now*

2007 246 x 172 mm 140 pages 28 b/w illus.

978-0-521-69691-3

Paperback

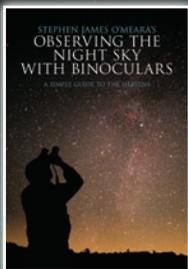
£19.99

HIGHLIGHT

Stephen James O'Meara's Observing the Night Sky with Binoculars

A Simple Guide to the Heavens

Stephen James O'Meara



Month by month, constellation by constellation, star by star, Stephen James O'Meara takes readers on a celestial journey to many of the most prominent sky-sights visible from mid-northern latitudes. This book will help amateur

astronomers become familiar with the stars and constellations visible from their backyards, and provide an invaluable reference for exploring the brightest and best stars, nebulae, and clusters visible through inexpensive, handheld binoculars.

'... O'Meara's book really did keep me interested from the outset. ... the reader is left feeling as though they have truly learned about what they have seen. ... Within each chapter there is interesting information that covers stars, nebulae, galaxies, star clusters etc. ... allows those who have binoculars rather than a telescope to get a great deal of enjoyment out of looking up at the sky.'

Astronomy Now

'O'Meara's writing inspires and his passion and enthusiasm for observing leaps off the pages.'

Sky at Night magazine

2008 297 x 210 mm 168 pages 225 b/w illus.

978-0-521-72170-7

Paperback

£20.99

Deep-Sky Companions: Hidden Treasures

Stephen James O'Meara



This exciting observing guide spotlights an original selection of 109 deep-sky objects that will appeal to sky-watchers worldwide. Stunning photographs and beautiful drawings accompany finder charts and detailed visual

descriptions of the objects, which include their rich histories and astrophysical significance.

'Steve O'Meara has done it again. [This book] is a beautifully written, personal guide for observing 109 of the most beautiful objects in the night sky, plus 20 more personally chosen deep-sky treasures. ... the depth of O'Meara's writing makes it a real gem.'

David H. Levy

2007 263 x 190 mm 602 pages

120 b/w illus. 110 maps

978-0-521-83704-0

Hardback

£26.99

Deep-Sky Companions: The Caldwell Objects

Stephen James O'Meara

Foreword by Patrick Moore



Stephen James O'Meara has tirelessly observed all of The Caldwell Objects, and this book presents his sketches and detailed visual descriptions, and discusses each object's history and astrophysical importance.

'... given the author's renowned observing skills and exceptional location ... The essays are delightfully descriptive and informative prose relating to the discovery, history and morphology of the objects spiced with many observing tips and comments on nearby objects.'

Astronomy and Space

2003 262 x 187 x 38mm 500 pages

256 b/w illus. 103 maps

4 tables

978-0-521-82796-6

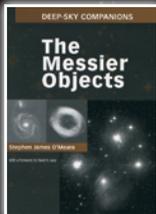
Hardback

£26.99

Deep Sky Companions: The Messier Objects

Stephen James O'Meara

Foreword by David H. Levy



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.

'...contains careful descriptions of each object, finder maps, telescopic drawings, and photographs. The text is spirited and informed, and the result is a must-have on the bookshelf of deep-sky enthusiasts.'

Astronomy Magazine

1999 261 x 186 mm 318 pages

330 b/w illus.

978-0-521-55332-2

Hardback

£26.99

Digital SLR Astrophotography

Michael A. Covington

University of Georgia



In this concise guide, experienced astrophotography expert Michael Covington outlines the simple, enduring basics to get you started. He covers a range of equipment, simple as well as

advanced projects, technical considerations, and image processing techniques, allowing the reader to find out how easy and enjoyable DSLR astrophotography can be!

'It is a book that could get an amateur from being a complete astrophotography novice to an advanced DSLR imager ... For someone starting out on the road to DSLR astro-imaging it is well worth having.'

Astronomy Now

2007 246 x 191 mm 234 pages

140 b/w illus. 5 tables

978-0-521-70081-8

Paperback

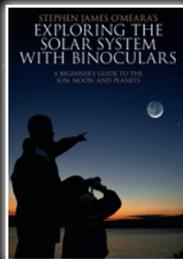
£23.99

NEW

Exploring the Solar System with Binoculars

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

Stephen James O'Meara



In this journey of discovery, Stephen James O'Meara shows you how to observe our Solar System's wonders with ease, using nothing more than the unaided eye and inexpensive handheld binoculars. The guide

presents a new way to identify and appreciate the wonders of the Solar System in detail, such as Lunar and solar eclipses, sunspots, the Moon's craters, the planets, meteors, and comets. It is a unique observing guide for all amateur astronomers, proving you don't need big and expensive equipment to enjoy astronomy from your own backyard. You will learn a variety of skills, including how to find Venus in the daytime, how to identify faint features in bright comets, how to increase your chances of seeing an abundant meteor shower, and how to track the changing aspects of the planets and their moons. A must for Solar System explorers everywhere!

2010 297 x 210 mm 168 pages 200 b/w illus.

978-0-521-74128-6

Paperback

£19.99

HIGHLIGHT

Gravity's Fatal Attraction

Black Holes in the Universe

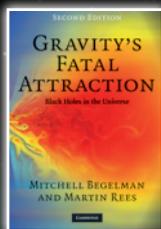
2nd edition

Mitchell C. Begelman

University of Colorado, Boulder

and Martin Rees

University of Cambridge



Richly illustrated with images from observatories on the ground and in space, plus computer simulations, this book shows how black holes were discovered, and discusses our current understanding of their role

in cosmic evolution. This second edition covers new discoveries made in the past decade, including definitive proof of a black hole at the centre of the Milky Way, evidence that the expansion of the Universe is accelerating, and the new appreciation of the connection between black holes and galaxy formation. Begelman and Rees blend theoretical arguments with observational results to demonstrate how both approaches contributed to this subject. The engaging style makes this book suitable for introductory undergraduate courses, amateur astronomers, and all readers interested in astronomy and physics.

From reviews of the 1st Edition;

'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.'

Stephen W. Hawking

'A terrific book, I doubt that you could find a more comprehensive and authoritative popular account of this spectacular subject.'

Marcus Chown, *New Scientist*

Contents: 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 264 pages

978-0-521-71793-9 Paperback £19.99

NEW

The Cambridge Double Star Atlas

James Mullaney

Illustrated by Wil Tirion



Over 2,000 selected pairs of stars are plotted in this magnificent atlas, each labelled with discoverer, catalogue, and/or observatory designations. Spiral bound and printed in red-light friendly colours, it is a must-have for stargazers.

'...backyard stargazers can now enjoy endless hours of double- and multiple-star observing. Mullaney's vivid descriptions of the finest showpieces truly inspire; Tirion's design is both handsome and practical. The work is destined to become an instant classic. Bravo!'

Stephen James O'Meara, *author of the Deep-Sky Companions observing guides and columnist for Astronomy magazine*

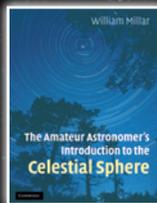
2009 303 x 244 mm 154 pages

978-0-521-49343-7 Paperback £27.50

The Amateur Astronomer's Introduction to the Celestial Sphere

William Millar

Grand Rapids Community College, Michigan



Written in a conversational style, using only elementary mathematics, this handy guide contains review questions and exercises to reinforce the reader's understanding. The last chapter contains a set of practical observation projects.

'... to many beginners will seem a convenient advantage ... the book achieves its objective better than some others I have read ...'

Astronomy Now

2006 246 x 189 mm 316 pages

127 b/w illus. 53 tables 55 exercises
978-0-521-67123-1 Paperback £27.99

Observing the Moon

The Modern Astronomer's Guide

Second edition

Gerald North



Written by an experienced and well-known lunar observer, this is a 'hands-on' primer for the aspiring observer of the Moon. In this updated second edition, the author accounts for the latest developments in lunar

imaging techniques, such as CCD imaging and webcam observing, and adds essential advice and observing tips.

'... the friendly and chatty style of Observing the Moon continues in this second edition... this book is a good friendly way to introduce amateurs to lunar observing ...'

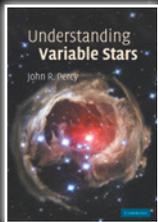
Journal of the British Astronomical Association

2007 252 x 200 mm 420 pages 243 b/w illus.
978-0-521-87407-6 Hardback £25.99

Understanding Variable Stars

John R. Percy

University of Toronto



Concise introduction and overview of variable stars, for undergraduate students and experienced amateur astronomers.

'...tightly written, and frequently interspersed with figures, and graphs, this book contains an enormity of fact and discussion

... is a foremost authority on variable stars, and is a marvellous repository of information. As such it is an ideal textbook for a serious student, or a reference book for the amateur astronomer.'

Astronomy & Space

2007 255 x 175 mm 372 pages 150 b/w illus.
978-0-521-23253-1 Hardback £33.00

Atlas of the Messier Objects

Highlights of the Deep Sky

Ronald Stoyan

Interstellarum magazine

Stefan Binnewies

Amateur astrophotographer

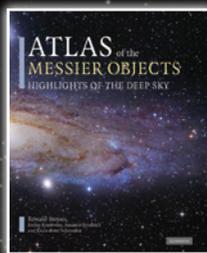
and Susanne Friedrich

Max-Planck-Institut für extraterrestrische

Physik, Garching, Germany

Translated by Klaus-Peter Schroeder

Universidad de Guanajuato, Mexico



The 110 deep sky objects in the Messier catalogue are among the most popular targets for amateur observers. This stunning new atlas presents a complete and lively account of all of the Messier

objects; providing information on each object's discovery, historical observations, its astrophysical significance, and detailed observational descriptions, alongside stunning colour astrophotos, historical sketches and new deep sky drawings, helping to bring the Messier objects to life.

'Stoyan's Atlas of the Messier Objects should be required reading for amateur astronomers, its impressive content, textually and visually, makes it a definitive work on the catalog and its objects. Numerous high-quality photographs and eyepiece drawings accompany the text. This book should be on the shelf of every observer, and deserves wide distribution in the United States market.'

David Eicher, Editor-in-Chief, Astronomy

2008 320 x 265 mm 370 pages
200 b/w illus. 180 colour illus. 50 tables
978-0-521-89554-5 Hardback £35.00

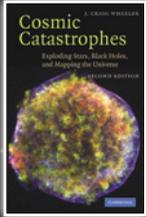
Cosmic Catastrophes

Exploding Stars, Black Holes, and Mapping the Universe

Second edition

J. Craig Wheeler

University of Texas, Austin



From supernovae and gamma-ray bursts to the accelerating Universe, this will be essential reading for undergraduate students in astronomy and astrophysics, and an excellent introduction for a wider audience. This fully updated second edition

incorporates new material on binary stars, black holes, gamma-ray bursts, worm-holes, quantum gravity and string theory.

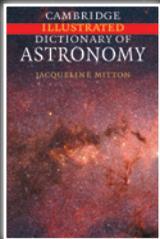
'... very informative and well worth reading... I would feel comfortable using this book as a text in a survey-level astronomy class, and I would also happily recommend it both to amateurs interested in following current topics in astrophysics and to my physicist colleagues.'

Sky & Telescope

2007 235 x 158 mm 356 pages 55 b/w illus.
978-0-521-85714-7 Hardback £26.99

Cambridge Illustrated Dictionary of Astronomy

Jacqueline Mitton



A lavishly-illustrated dictionary containing around 1300 entries, 300 illustrations and 20 new star maps. A myriad of astronomical objects, constellations, observatories and space missions are covered, acronyms and specialist

terms are explained, making this a complete reference for astronomers of all ages.

'... the most thorough and carefully assembled reference resource for teachers and enthusiasts of astronomy.'

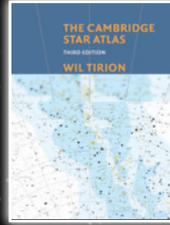
Spaceflight

2007 238 x 163 mm 416 pages
30 b/w illus. 270 colour illus. 20 maps
978-0-521-82364-7 Hardback £19.99

The Cambridge Star Atlas

Third edition

Wil Tirion



The Cambridge Star Atlas is a best-selling general atlas of the sky for beginners and more advanced observers, ideal for use worldwide and throughout the year. The full colour sectional and all-sky charts are attractive and very easy-to-use, plus there are monthly charts and a Moon map.

'... Imagine that you are anywhere in the world and want to know what stars are in the sky at any time; then this colourful and handy Cambridge Star Atlas ... is the book for you.'

New Scientist

2001 234 x 312 mm 96 pages
4 b/w illus. 52 maps 45 tables
978-0-521-80084-6 Hardback £23.99

The Cambridge Encyclopedia of Stars

James B. Kaler

University of Illinois, Urbana-Champaign



This unique encyclopedia provides a fascinating and fully comprehensive description of stars and their natures and is filled with beautiful colour images. The book covers the story of astronomy,

explanations of technical terms and the life cycle of stars and is an invaluable work for both beginners and advanced readers.

'The structure of the book is cleverly arranged to allow the author to expound a story within each section ... [Dr Kaler's] relaxed conversational style carried the reader along through even difficult concepts ...'

Astronomy Space

2006 285 x 229 mm 338 pages
77 b/w illus. 174 colour illus.
978-0-521-81803-2 Hardback £39.00

NEW

A Question and Answer Guide to Astronomy

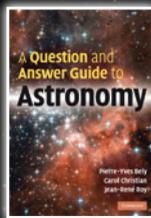
Pierre-Yves Bely

Carol Christian

Space Telescope Science Institute, Baltimore

and Jean-René Roy

Gemini Observatory, La Serena, Chile



This book answers the fascinating questions that we have been asking ourselves for hundreds of years. Using non-technical language, the authors summarize 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.

2010 247 x 174 mm 330 pages

66 b/w illus.

978-0-521-18066-5

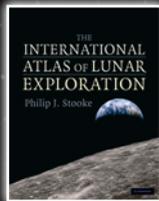
Paperback

c. £16.99

The International Atlas of Lunar Exploration

Philip J. Stooke

University of Western Ontario



Bringing together a wealth of information from many sources, this atlas is a comprehensive reference on lunar exploration. It tells the story of every spacecraft mission to the Moon since the dawn of the space age.

Each account is illustrated with a unique combination of maps and annotated photographs, many of which were created especially for this atlas. The missions are listed in chronological order, providing readers with a step-by-step history of lunar missions.

'A tour de force account of the human race's exploration of its nearest celestial neighbour.'

New Scientist

2007 283 x 228 mm 464 pages 85 b/w illus.

978-0-521-81930-5

Hardback

£99.00

Our Changing Planet

The View from Space

Edited by Michael D. King

NASA Goddard Space Flight Center

Claire L. Parkinson

NASA Goddard Space Flight Center

Kim C. Partington

Polar Imaging Ltd, Hampshire

and Robin G. Williams

La Jolla, California



Led by four editors with support from a production team at NASA Goddard Space Flight Center, many of the world's top remote sensing scientists showcase some spectacular and beautiful

satellite imagery along with informed essays on the science behind these images and the implications of what is shown. This is a stunningly attractive and informative book for anyone interested in environmental issues and the beauty of our home planet, providing inspiration for students, teachers, environmentalists and the general public alike.

'... an awe-inspiring collection of images of the Earth from space. This wonderful volume provides a masterful association of imagery and explanation. You will have difficulty closing it once opened. I give it my highest recommendation.'

Sir Ranulph Fiennes, internationally renowned explorer and adventurer

2007 317 x 258

400 pages

588 colour illus.

978-0-521-82870-3

Hardback

£28.99

On Space and Time

Edited by Shahn Majid

Queen Mary, University of London

With contributions by Alain Connes

Michael Heller, Roger Penrose

John Polkinghorne and Andrew Taylor



What is the true nature of space and time? These concepts are at the heart of science, but they remain deeply wrapped in enigma. Their structure at both the smallest pre-subatomic and the largest cosmological levels continues to defy modern

physics and may require revolutionary new ideas for which science is still grasping.

This unique volume brings together world leaders in cosmology, particle physics, quantum gravity, mathematics, philosophy and theology, to provide fresh insights into the deep structure of space and time.

Andrew Taylor explains the evidence for dark matter and dark energy. Shahn Majid argues that space and time should be quantum. Roger Penrose explains what in his view comes before the 'Big Bang'.

Alain Connes argues that matter is geometry as a fine structure to spacetime. Michael Heller explores the philosophical and theological implications of spacetime. John Polkinghorne argues for a theory of how time unfolds.

'... a unique collection of essays. ... The non-specialist might struggle with some of the mathematic vocabulary but the philosophical content is thought provoking ... a worthwhile read.'

Federation of Astronomical Societies Newsletter

'... an attractive little book, featuring some highly original thinkers. The chapters by Penrose and Connes are especially good and easily worth the price of the book alone.'

Mathematical Reviews

2008 234 x 159 mm 320 pages 45 b/w illus.

978-0-521-88926-1 Hardback £14.99

NEW

The Scientific Exploration of Mars

Fredric W. Taylor

University of Oxford



This book explores how we are sending unmanned spacecraft to Mars to examine its climate, search for evidence of past or present life, and learn how conditions there relate to those on Earth. Plans are

now being prepared for a manned mission to Mars, set against an uncertain background of political, practical, technical and financial considerations. This unique book provides a complete description of the past, present and future of Mars exploration.

2009 246 x 189 mm 392 pages

128 b/w illus. 54 colour illus.

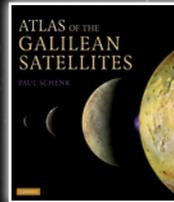
978-0-521-82956-4 Hardback £30.00

NEW

Atlas of the Galilean Satellites

Paul Schenk

Lunar and Planetary Institute, Houston



Jupiter's satellites are revealed as four visually striking and geologically diverse planetary bodies: Io's volcanic lavas and towering mountains; Europa's fissured ice surface; the

craters, fractures and polar caps of Ganymede; and the giant impact basins, desiccated plains and icy pinnacles of Callisto. Featuring images taken from the recent Galileo mission, it contains 65 global and regional maps, nearly 250 high-resolution mosaics, and images taken at the highest available resolutions.

2010 276 x 240 mm 300 pages

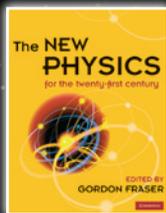
978-0-521-86835-8 Hardback c.£90.00

New in Paperback

The New Physics

For the Twenty-First Century

Gordon Fraser



Revealing how physics plays a vital role in what we see around us, this book will fascinate scientists of all disciplines, and anyone wanting to know more about the world of physics today. International experts, including Nobel prize winners, explore the frontiers of modern physics.

'It is beautifully presented and, given the contributor list, authoritative ... I wholeheartedly recommend it to researchers, postgraduate students and perhaps advanced undergraduates in the sciences.'

Times Higher Education Supplement

2009 253 x 204 mm 556 pages

978-0-521-14002-7

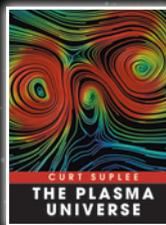
Paperback

£22.99

NEW

The Plasma Universe

Curt Suplee



The exciting world of plasma physics, a potential source of unlimited, non-polluting energy, is revealed in this richly illustrated, full colour book. It describes the phenomena and efforts to understand

them, taking the reader on a journey from neighbourhood neon lights to the remotest galaxies and beyond.

'The Plasma Universe is a lively, compact, beautifully illustrated and eminently readable exposition of the amazing scope of modern plasma physics.'

Curtis Callan, Professor of Physics, Princeton University, and President-Elect, American Physical Society

2009 246 x 189 mm 88 pages 72 b/w illus.

978-0-521-51927-4

Paperback

£12.99

NEW

Discovering the Expanding Universe

Harry Nussbaumer

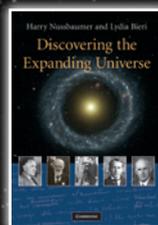
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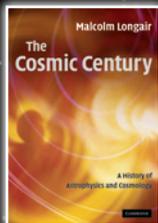
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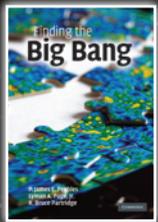
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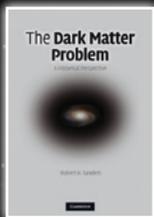
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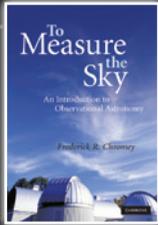
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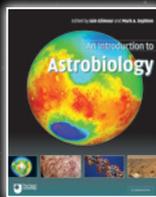
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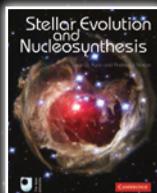
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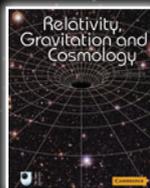
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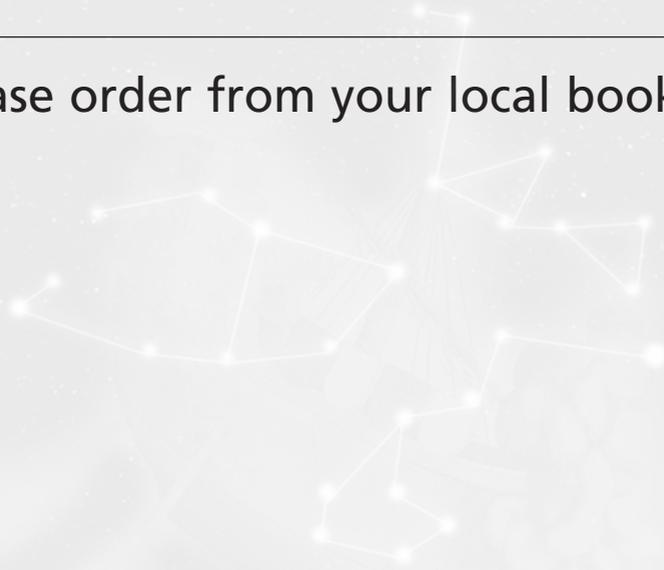


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