

---

# Read Book The Urban Astronomers Guide A Walking Tour Of The Cosmos For City Sky Watchers The Patrick Moore Practical Astronomy Series

---

Right here, we have countless book **The Urban Astronomers Guide A Walking Tour Of The Cosmos For City Sky Watchers The Patrick Moore Practical Astronomy Series** and collections to check out. We additionally find the money for variant types and then type of the books to browse. The pleasing book, fiction, history, novel, scientific research, as well as various other sorts of books are readily genial here.

As this The Urban Astronomers Guide A Walking Tour Of The Cosmos For City Sky Watchers The Patrick Moore Practical Astronomy Series, it ends stirring creature one of the favored ebook The Urban Astronomers Guide A Walking Tour Of The Cosmos For City Sky Watchers The Patrick Moore Practical Astronomy Series collections that we have. This is why you remain in the best website to see the amazing books to have.

---

## **OWOB0H - SAVANAH BAKER**

---

An abundantly illustrated guide to the year's best stargazing season. "Summer brings with it fine stargazing weather; it also happens to be the time of the year when our galaxy, the Milky Way, arches high across the sky." -- Terence Dickinson The cool, clear nights from May to October offer astronomers the best opportunities for stargazing. Few sights in nature can compare with the splendor of a dazzling star-filled sky. Summer Stargazing captures the grandeur of the universe with down-to-earth simplicity. All that is needed is a reasonably dark night sky, a pair of binocu-

lars or a simple telescope, and this book. The book features everything else the amateur astronomer needs, including easy-to-use color star charts that cover the entire North American sky for one year and photographic-quality charts for this main stargazing season. With Summer Stargazing, astronomers can delve into the majesty of the starry night to explore: Planets of the Solar System Galaxies Remote star-forming nebulas Glittering star dusters and more. Helpful advice is given for safely viewing special phenomena such as eclipses and auroras. Summer Stargazing is both a stargazing guide and a pictorial celebration of the summer night sky.

Light pollution has spread so much in the last few decades that it often compromises our view of the stars. It is becoming more and more difficult to find an observing site with clear, dark skies away from light and industrial pollution. However, with patience, some simple equipment, and by choosing the right targets to observe, amateur astronomers can still find observing from towns and cities a rewarding hobby. The result of thirty years of observing the night sky from within a city, Denis Berthier's practical guide will help amateur astronomers to enjoy their hobby without having to travel to distant sites, and without using complicated equipment or difficult techniques, enabling them to observe and photograph stars and planets as well as many other celestial objects.

Astrophysics is often –with some justification – regarded as incomprehensible without the use of higher mathematics. Consequently, many amateur astronomers miss out on some of the most fascinating aspects of the subject. *Astrophysics Is Easy!* cuts through the difficult mathematics and explains the basics of astrophysics in accessible terms. Using nothing more than plain arithmetic and simple examples, the workings of the universe are outlined in a straightforward yet detailed and easy-to-grasp manner. The original edition of the book was written over eight years ago, and in that time, advances in observational astronomy have led to new and significant changes to the theories of astrophysics. The new theories will be reflected in both the new and expanded chapters. A unique aspect of this book is that, for each topic under discussion, an observing list is included so that observers can actually see for themselves the concepts presented –stars of the spectral sequence, nebulae, galaxies, even black holes. The observing list has been revised and brought up-to-date in the Se-

cond Edition.

Offers an introduction to locating and observing celestial objects, including tips on finding deep-sky objects and advice on the best times for viewing.

This innovative Haynes Manual presents in-depth information about all the practical aspects of astronomy. Written with style and enthusiasm by a dedicated amateur and extensively illustrated, this book applies the Haynes approach to a popular and inspirational hobby that requires plenty of practical information and understanding. Whether novice or keen amateur, everyone with an interest in astronomy will be fascinated by this Haynes Manual.

The ideal introduction to astronomy in the city. These days, skywatchers do not have to live close to a city or town center to suffer from the effects of light pollution. According to the National Park Service, city lights as far as 200 miles away diminish views of night skies. So even in a remote field, the sky above may be part of the "sky glow" of the surrounding city or town. Weather might be an issue too, as it is for all skywatchers. Nevertheless, there are many celestial delights to be seen. *Urban Astronomy* shows that nighttime lighting and the resultant brightening of the sky can be combatted and demonstrates how to make the best of poor conditions. Although the unaided eye may be able to pick out only a few hundred stars, binoculars or a small telescope will reveal many times that number. A little optical aid can also give you good views of every type of major astronomical object, including star clusters, nebulae and galaxies. For example, there are special filters that let through the light from distant nebulae while

blocking out wavelengths infested by unwanted stray light from streetlights. Modern CCDs allow modest amateur telescopes to penetrate the urban sky glow and reveal sights that would have taxed larger instruments 30 years ago. The book also covers: How weather and pollution affect observing Specific tips to combat urban streetlighting The best objects to observe from cities and towns Deep-sky objects visible from urban locations in both the northern and southern hemispheres The range of telescopes and accessories for light-polluted skies CCDs and the rebirth of astronomy from cities and towns How to find dark skies. The book's nine chapters cover the basics of successful urban viewing, its "enemies" -- weather and streetlights -- and explain how to choose viewing targets and arm yourself with the right "weapons and ammunition" to find them. The book also covers indoor astronomy. Urban Astronomy is an ideal guide to skywatching while combating light pollution. It will show you how to get the most out of almost any sky.

Appendix C William Herschel: the greatest visual observer of all time - by Larry Mitchell -- Appendix D Image credits -- Index

This book serves as a comprehensive guide for using a Nexstar Evolution mount with WiFi SkyPortal control, walking the reader through the process for aligning and operating the system from a tablet or smartphone. The next generation Go-To mount from Celestron, this is compatible not only with the Nextstar Evolution but also with older mounts. It is the ideal resource for anyone who owns, or is thinking of owning, a Nexstar Evolution telescope, or adapting their existing Celestron mount. Pros and cons of the system are thoroughly covered with a critical depth that addresses any possible question by users. Beginning with a brief his-

tory of Go-To telescopes and the genesis of this still new technology, the author covers every aspect of the newly expanding capability in observing. This includes the associated Sky Portal smartphone and tablet application, the transition from the original Nexstar GoTo system to the new SkyPortal system, the use of the Sky Portal application with its Sky Safari 4 basic software and Celestron WiFi adaptations, and discussions on the use of SkyPortal application using the Celestron adapter on older Celestron mounts. Comments and recommendations for equipment enable the reader to successfully use and appreciate the new WiFi capability without becoming overwhelmed. Extensively illustrated using actual screenshots from the program interface, this is the only guide to the Nextstar SkyPortal an observer will need.

Bob Mizon, one of the world's best known campaigners against the veil of light pollution that has taken away the starry sky from most of the world's population, takes readers to a hundred places in the UK and the USA where the wonders of the night sky might still be enjoyed in perfect or near-perfect night skies. Visiting small hotels and simple campsites, and savoring vast dark-sky reserves where the night sky is actively protected, The Million-Star Hotel celebrates the black skies of yesteryear - which may become a reality for more and more of us as modern technology reins in lighting and puts it only where needed. How can you prepare for your stay beneath the stars? What astronomy can you do during the daytime? What kind of equipment will you need? Questions such as these are answered, and if town dwellers return inspired - and, Bob hopes, also inspired to look with fresh eyes at their own local lighting - there is enough information here for

them to equip themselves for some urban astronomy too. Like everyone else, most amateur astronomers live busy lives. After a long day or work or looking after young children, the last thing you want as an observer is to have to lug out a large telescope and spend an hour getting it ready before it can be used. Maybe you are going on vacation somewhere in the countryside where there are sure to be dark skies, but you don't necessarily want astronomy to dominate the trip. Or suppose you are not quite committed to owning a large telescope, but curious enough to see what a smaller, portable setup can accomplish. These are times when a small "grab 'n' go" telescope, or even a pair of binoculars, is the ideal instrument. And this book can guide you in choosing and best utilizing that equipment. What makes a telescope fall into the "grab 'n' go" category? That's easy - speed of setting up, ease of use, and above all, portability. In Part I of this book, we survey the various types of equipment, including accessories and mounts, that are available, and what it is best for what kind of viewing. Part II is about using your grab 'n' go telescope to visit a wealth and wide variety of objects. There are chapters on solar, lunar and planetary observing, as well as descriptions of many deep sky objects, including double and variable stars, planetary, emission and reflection nebulae, open and globular clusters and distant galaxies. This ambitious text is dedicated to those who love to or - because of their limited time - must observe the sky at a moment's notice, whether from the comfort of a backyard or while on business or vacation far from home. Everything you need to know is here. So get started!

How do you choose your first telescope? Or build one from first principles? What can the deep sky offer you season-by-season?

How do you get started in astrophotography? And progress to CCD imaging? The Guide to Amateur Astronomy answers the questions of the novice and the experienced amateur astronomer in one easy-to-use and comprehensive account. Throughout the emphasis is on practical methods to get you started and then develop your skills; with lavish illustrations to show you just what is possible. This second edition of the highly successful Guide has been fully revised and updated. It now takes you from basic 'piggyback' astrophotography, through the use of a cold camera to state-of-the-art CCD imaging; from studies of the planets to the most distant objects in the Universe. From guidelines for the care and adjustment of your telescope through to lists of the spectral classification of stars, amateur astronomy societies and clubs, all the information you need for your voyage of discovery and revelation is provided in this self-contained, helpful guide.

Guide to Observing Deep-Sky Objects is an invaluable reference for all amateur astronomers. The book contains, for each constellation, (1) a star chart showing the Bayer labels, (2) a table for many of the stars in the constellation, along with their positions and magnitudes, and (3) a table of the major deep-sky objects in the constellation, with relevant observational data. Facing pages provide unique year-long graphs that show when the constellation is visible in the sky, which allows the user to quickly determine whether a given constellation can be seen, and when the best time to see it will be.

A complete guide for the amateur astronomer living in an urban or suburban center... The Urban Astronomer If you think a trip to the country is necessary to observe celestial objects, take a se-

cond look. Viewing the sky from an urban location can be just as fun and educational — if you know how to go about it. The Urban Astronomer shows amateur and more advanced astronomers the best ways and times to observe celestial objects from a city or suburban environment. Complete with detailed illustrations, The Urban Astronomer: Shows readers how to overcome the special problems of viewing the sky from cities and suburbs, such as light pollution Describes in detail those objects most easily viewed from a city location Includes many sky activities that can be enjoyed by novice and experienced urban astronomers Provides helpful tips and checklists for preparing your own stargazing outing Covers objects for naked-eye observation as well as those that need binoculars or telescopes and describes the best equipment for the urban stargazer

Over the last 15 years or so there has been a huge increase in the popularity of astrophotography with the advent of digital SLR cameras and CCD imagers. These have enabled astronomers to take many images and, indeed, check images as they scan the skies. Processing techniques using computer software have also made 'developing' these images more accessible to those of us who are 'chemically challenged!' And let's face it - some of the pictures you see these days in magazines, books, and on popular web forums are, frankly, amazing! So, why bother looking through the eyepiece you ask? Well, for one thing, setting up the equipment is quicker. You just take your 'scope out of the garage or, if you're lucky enough to own one, open the roof of your observatory, align the 'scope and off you go. If you have an equatorial mount, you'll still need to roughly polar align, but this really takes only a few moments. The 'imager' would most likely need to

spend more time setting up. This would include very accurate polar alignment (for equatorial mounts), then finding a guide star using his or her finder, checking the software is functioning properly, and continuous monitoring to make sure the alignment is absolutely precise throughout the imaging run. That said, an imager with a snug 'obsy' at the end of the garden will have a quicker time setting up, but then again so will the 'visual' observer.

Profiles more than 130 scientists from around the world who made important contributions in the fields of space and astronomy, including John Couch Adams, Albert Einstein, and Plato.

"I hope that people all around the world never forget what a wonderful thing it is to lie on your back and look up at the stars" Pete Seeger What is the fascination that constellations hold for people? There are probably as many different answers to that question as there are people. For many, though, the constellations are the stepping-off point into the fabulous, mind-bending discoveries and concepts of modern astronomy. For others it is their long and intriguing history that beckons. For some people the constellations provide the means for navigation and orientation over the surface of the Earth, and of course there are the millions who place some faith in horoscopes. But for most people the patterns in the sky are a beautiful part of their environment to be treasured alongside the forests, fields and rivers that make life worth living. However just as we are losing our green environment to pollution, so we are losing our sky. The glow from cities across the world swamps the stars in the night sky. Astronomers have had to retreat to remote mountain tops to escape that light pollution. The rest of us must make do with what is available. From the centre of a city, or any other brightly lit area, probably no

stars at all will be visible even on the clearest of nights. From the suburbs, the brighter stars should normally be seen.

Offers basic information about astronomy, including its terminology, the best equipment to purchase for stargazing, and images of over one hundred objects to view in the night sky such as star clusters, nebulae, and galaxies.

This book covers the "why," "how," and "what" of astronomy under light-polluted skies. The prospective city-based observer is told why to observe from home (there are hundreds of spectacular objects to be seen from the average urban site), how to observe the city sky (telescopes, accessories, and modern techniques), and what to observe. About half of the book is devoted to describing "tours" of the sky, with physical and observational descriptions, at-the-eyepiece drawings, and photographs.

This is the third edition of Phil Harrington's popular and comprehensive guide to astronomical equipment, written for both new astronomers as well as experienced amateurs. It includes numerous tips and tricks from other experienced astronomers. In this revised and updated edition of *Star Ware*, the essential guide to buying astronomical equipment, award-winning astronomy writer Philip Harrington does the work for you, analyzing and exploring today's astronomy market and offering point-by-point comparisons of everything you need. Whether you're an experienced amateur astronomer or just getting st.

This is the largest and most comprehensive atlas of the universe ever created for amateur astronomers. With finder charts of unprecedented detail, in both normal and mirror-image views, and an extensive list of 14,000 objects, it provides a detailed observ-

ing guide for almost any practical amateur astronomer, up to the most advanced. Spanning some 3,000 pages, this is a project that is possible only on CD-ROM. The CD-R pages are extensively indexed and referenced for quick location of objects. The accompanying book gives an introduction to the Atlas, showcases the maps, describes the CD-R content and organization, and includes various appendices.

This book is for the aging amateur astronomy population, including newcomers to astronomy in their retirement and hobbyists who loved peering through a telescope as a child. Whether a novice or an experienced observer, the practice of astronomy differs over the years. This guide will extend the enjoyment of astronomy well into the Golden Years by addressing topics such as eye and overall health issues, recommendations on telescope equipment, and astronomy-related social activities especially suited for seniors. Many Baby-Boomers reaching retirement age are seeking new activities, and amateur astronomy is a perfect fit as a leisure time activity. Established backyard astronomers who began their love of astronomy in their youth, meanwhile, may face many physical and mental challenges in continuing their lifelong hobby as they age beyond their 55th birthdays. That perfect telescope purchased when they were thirty years old now suddenly at sixty years old feels like an immovable object in the living room. The 20/20 eyesight has given way to reading glasses or bifocals. Treasured eyepieces feel all wrong. Growing old is a natural process of life, but astronomy is timeless. With a little knowledge and some lifestyle adjustments, older astronomers can still enjoy backyard observing well into their seventies, eighties and even in-



to their nineties.

Did you know that stars are seasonal? That Orion is one of the brightest constellations? That a single day on Venus is longer than an entire year on Venus? Space has captivated mankind since the beginning of time. Fifty years ago, Neil Armstrong became the first man to step on the moon and since then our knowledge of astronomy has continued to expand. With so many mysteries yet to be solved, science journalist Abigail Beall takes readers on an astonishing journey through the landscape of space. In *The Art of Urban Astronomy*, you will be guided through the seasons and learn about the brightest stars and constellations, the myths and legends of astronomy and how to identify star clusters and galaxies with just your eyes or a pair of binoculars. For urban dwellers wrapped up in the rush and bustle of the city, it can be calming and truly valuable to take the time simply to stop, look and reconnect with nature. Packed full of seasonal star charts, constellation charts and fascinating facts, this is the perfect guide for those who have looked up at the night sky and don't know where to begin. After reading this book, you'll never look up in the same way again.

For many years now, we have known the story of the Solar System, and the Earth's place in it. We have mapped out the stars in the night sky, and have known that we live in a disk of stars that makes up the Milky Way galaxy. But, in the past few decades, huge steps have been taken in the field of astronomy - steps which have let us venture ever further across space and time, with telescopes that let us see, in ever greater detail, those distant parts of the universe that lie far beyond our Solar System's planets, and even give us a glimpse of the first moments of the

Universe. Yet these extraordinary advances in our understanding of the wider Universe have led us to even greater mysteries. What happened in the first moments after the Big Bang? What are the mysterious 'dark' parts of the Universe? Is space infinite? Is there life elsewhere? And, what happens in those parts of space where conditions are so intense that our laws of physics break down? In this new Pelican book, practising cosmologist and Professor of Astrophysics Jo Dunkley guides us through the history of our Universe as we know it, taking us to the heart of these many unsolved questions.

This book will interest anyone who marvels at the night sky and would like to learn to recognise constellations and identify the brightest stars by name. Step-by-step, the reader is guided through the knowledge needed to recognise key constellations, identify stars and planets, and interpret changes in the overall appearance of the sky throughout the year.

A practical guide to viewing the universe.

Written by an experienced and well-known lunar observer, this is a hands-on primer for the aspiring observer of the Moon. Whether you are a novice or are already experienced in practical astronomy, you will find plenty in this book to help you raise your game to the next level and beyond. In this thoroughly updated second edition, the author provides extensive practical advice and sophisticated background knowledge of the Moon and of lunar observation. It incorporates the latest developments in lunar imaging techniques, including digital photography, CCD imaging and webcam observing, and essential advice on collimating all common types of telescope. Learn what scientists have discovered about

our Moon, and what mysteries remain still to be solved. Find out how you can take part in the efforts to solve these mysteries, as well as enjoying the Moon's spectacular magnificence for yourself!

Both beginning/novice amateur astronomers (at the level of Astronomy and Night Sky magazine readers), as well as more advanced amateur astronomers (level of Sky and Telescope) will find this book invaluable and fascinating. It includes detailed up-to-date information on sources, selection and use of virtually every major type, brand and model of such instruments on today's market. The book also includes details on the latest released telescope lines, e.g. the 10-, 12-, 14- and 16-inch aperture models of the Meade LX-R series. As a former editor for Sky & Telescope, Astronomy, and Star & Sky magazines, the author is the ideal person to write this book.

Choosing and Using the New CAT will supersede the author's successful Choosing and Using a Schmidt-Cassegrain Telescope, which has enjoyed enthusiastic support from the amateur astronomy community for the past seven years. Since the first book was published, a lot has changed in the technology of amateur astronomy. The sophistication and variety of the telescopes available to amateurs has increased dramatically. Computerized SCTs, Maksutov-Cassegrains, and most recently Meade's new and acclaimed Ritchey-Chrétiens have come to dominate the market. That means that all amateurs considering the purchase of a new telescope (not only a SCT, and not just beginners) will benefit from this detailed guide. Choosing the right telescope for particular kinds of observation (or even for general work) is far from easy - but Rod Mollise gives invaluable advice and guidance.

Amateur astronomy is becoming increasingly popular, mostly because of the availability of relatively low-cost astronomical telescopes such as the Schmidt-Cassegrain and Maksutovs. The author describes what these instruments will do, how to use them, and which are the best - he draws on 25-years of experience with telescopes. There are sections on accessories, observing techniques, and hints and tips on: cleaning, collimating, maintaining the telescope, mounting, using the telescope in various conditions, computer control, and imaging (wet, digital and CCD). This is the perfect book for amateur astronomers who are about to invest in a new Schmidt-Cassegrain or Maksutov telescope, or for those who already have one and want to get the most out of it.

Amateur astronomers who want to enhance their capabilities to contribute to science need look no farther than this guide to using remote observatories. The contributors cover how to build your own remote observatory as well as the existing infrastructure of commercial networks of remote observatories that are available to the amateur. They provide specific advice on which programs to use based on your project objectives and offer practical project suggestions. Remotely controlled observatories have many advantages—the most obvious that the observer does not have to be physically present to carry out observations. Such an observatory can also be used more fully because its time can be scheduled and usefully shared among several astronomers working on different observing projects. More and more professional-level observatories are open to use by amateurs in this way via the Internet, and more advanced amateur astronomers can even build their own remote observatories for sharing among members of a society or interest group. Endorsements: "Remote Observato-



ries for Amateur Astronomers Using High-Powered Telescopes from Home, by Jerry Hubbell, Rich Williams, and Linda Billard, is a unique contribution centering on computer-controlled private observatories owned by amateur astronomers and commercialized professional-amateur observatories where observing time to collect data can be purchased. Before this book, trying to piece together all of the necessary elements and processes that make up a remotely operated observatory was daunting. The authors and contributors have provided, in this single publication, a wealth of information gained from years of experience that will save you considerable money and countless hours in trying to develop such an observatory. If you follow the methods and processes laid out in this book and choose to build your own remotely operated observatory or decide to become a regular user of one of the commercial networks, you will not only join an elite group of advanced astronomers who make regular submissions to science, but you will become a member of an ancient fraternity. Your high-technology observatory will contain a “high-powered telescope” no matter how large it is, and from the comfort of home, you can actively contribute to the work that started in pre-history to help uncover the secrets of the cosmos.” Scott Roberts Founder and President, Explore Scientific, LLC. “In the past three and a half decades, since I first became involved with remote observatories, the use of remote, unmanned telescopes at fully automated observatories has advanced from a very rare approach for making astronomical observations to an increasingly dominant mode for observation among both professional and amateur astronomers. I am very pleased to see this timely book being published on the topic. I highly recommend this book to readers because it not on-

ly covers the knowledge needed to become an informed user of existing remote observatories, but also describes what you need to know to develop your own remote observatory. It draws on more than two decades of remote observatory operation and networking by coauthor Rich Williams as he developed the Sierra Stars Observatory Network (SSON) into the world-class network it is today. This book is the ideal follow-on to coauthor Jerry Hubbell’s book *Scientific Astrophotography* (Springer 2012). Remote observatories have a bright future, opening up astronomy to a new and much larger generation of professional, amateur, and student observers. Machines and humans can and do work well together. I hope you enjoy reading this book as much as I have and will take advantage of the developments over the past several decades by the many pioneers of remote observatories.” Russ Genet, PhD. California Polytechnic State University Observing Saturn for the first time is a memory that stays with us for the rest of our lives, and for many it is the start of an odyssey--an odyssey into observational astronomy. *Remote Observatories for Amateur Astronomers* is a book written for observers, beginners, and old hands alike, providing detailed advice to those wishing to improve their observing skills. Many will want to build and operate a remotely controlled observatory, and for those, Part I of this book is an invaluable source of information. If, like me, you choose to avoid the capital outlay of owning your own facility, Part II describes how you can use one of the many professionally run large scopes where, for a few dollars, you can capture spectacular color images of nebulae, galaxies, and comets. My own scientific interest in short period eclipsing binaries has been made possible through the availability of remote telescopes such as those oper-

ated by the Sierra Stars Observatory Network (SSON). Whichever route you take, this book is essential reading for all who aspire to serious observing. David Pulley The Local Group (UK)

Contains a referential glossary of astronomy-related terms, biographies of important astronomers and astronauts, and a chronology of notable events contributing to the science.

The touchstone for contemporary stargazers. This classic, groundbreaking guide has been the go-to field guide for both beginning and experienced amateur astronomers for nearly 30 years. The fourth edition brings Terence Dickinson and Alan Dyer's invaluable manual completely up-to-date. Setting a new standard for astronomy guides, it will serve as the touchstone for the next generation of stargazers as well as longtime devotees. Technology and astronomical understanding are evolving at a breathtaking clip, and to reflect the latest information about observing techniques and equipment, this massively revised and expanded edition has been completely rebuilt (an additional 48 pages brings the page count to 416). Illustrated throughout with all-new photographs and star charts, this edition boasts a refreshed design and features five brand-new chapters, including three essential essays on binocular, telescope and Moon tours by renowned astronomy writer Ken Hewitt-White. With new content on naked-eye sky sights, LED lighting technology, WiFi-enabled telescopes and the latest advances in binoculars, telescopes and other astronomical gear, the fourth edition of *The Backyard Astronomer's Guide* is sure to become an indispensable reference for all levels of stargazers. New techniques for observing the Sun, the Moon and solar and lunar eclipses are an especially timely addition, given the upcoming solar eclipses in 2023 and 2024. Rounding out th-

ese impressive offerings are new sections on dark sky reserves, astro-tourism, modern astrophotography and cellphone astrophotography, making this book an enduring must-have guide for anyone looking to improve his or her astronomical viewing experience. *The Backyard Astronomer's Guide* also features a foreword by Dr. Sara Seager, a Canadian-American astrophysicist and planetary scientist at the Massachusetts Institute of Technology and an internationally recognized expert in the search for exoplanets.

Offers amateur astronomers a guide to techniques and available technologies for observing the night sky from an urban location, discussing optimal weather conditions, ways to reduce the effects of light, different types of telescopes, and readily seen celestial bodies

In the ten years since this award-winning book was originally written by Michael Porcellino, the field of astronomy and its discoveries has grown by leaps and bounds. From the astounding images sent back by the Hubble Space Telescope, to the bright comet Hale-Bopp from the fleet of Martian probes, to the long-distance explorations of the Moon, Jupiter, Venus and Saturn--the universe has become more accessible than ever. And thanks to this revised and thoroughly updated new edition by astronomer and science writer, Patricia Barnes-Svarney, anyone with an interest can delve into its wonders. From the very close up to the far reaches of space, *THROUGH THE TELESCOPE* presents a uniquely "user-friendly" view of the universe, and offers both novice and advanced amateur astronomers some of the best tools available to watch the nighttime skies. You'll learn all about: \* Setting up a good, user-friendly telescope system \* How to look at the uni-

verse in order to really see it \* Upgrading your telescope for peak performance \* How to spot a star cluster, a nebulaÖeven a supernova \* Forming your own network of amateur astronomers. Complete with a web site appendix and fully updated charts on eclipses and planetary oppositions well into the year 2000, this edition of an acclaimed book will be an invaluable users guide for aspiring astronomers entering the new millennium.

This book contains everything an astronomer needs to know about binocular observing. The book takes an in-depth look at the instruments themselves. It has sections on evaluating and buying binoculars and binocular telescopes, their care, mounting, and accessories. In addition there is a selection of fifty fine objects to be seen with 50mm and 100mm binoculars. The advantages of using both eyes for astronomical observing are many and considerable, largely because of the way the human brain processes visual information. This book enables the astronomer to maximize those advantages.

It is a pleasure to present this work, which has been well received in German-speaking countries through four editions, to the English-speaking reader. We feel that this is a unique publication in that it contains valuable material that cannot easily-if at all-be found elsewhere. We are grateful to the authors for reading through the English version of the text, and for responding promptly (for the most part) to our queries. Several authors have supplied us, on their own initiative or at our suggestion, with revised and updated manuscripts and with supplementary English references. We have striven to achieve a translation of Handbuch for Sternfreunde which accurately presents the qualitative and quantitative scientific principles contained within each chapter

while maintaining the flavor of the original German text. Where appropriate, we have inserted footnotes to clarify material which may have a different meaning and/or application in English-speaking countries from that in Germany. When the first English edition of this work, *Astronomy: A Handbook* (translated by the late A. Beer), appeared in 1975, it contained 21 chapters. This new edition is over twice the length and contains 28 authored chapters in three volumes. At Springer's request, we have devised a new title, *Compendium of Practical Astronomy*, to more accurately reflect the broad spectrum of topics and the vast body of information contained within these pages.

Discover the incomparable beauty of the Northern Lights with this accessible guide for aspiring astronomers and seasoned night sky observers. Covers the essential equipment needed for observation and photography and full of stunning photographs.

Are we alone in the Universe? Was there anything before the Big Bang? Are there other universes? What makes stars shine? Where does Earth's water come from? Why is the night sky dark? Was there ever life on Mars? How do telescopes work? This engaging guide book answers all these questions and hundreds more, making it a practical reference for anyone who has ever wondered what is out in the cosmos, where it all comes from, and how it all works. Richly illustrated in color throughout, it gives simple yet rigorous explanations in non-technical language, summarizing current astronomical knowledge, without overlooking the important underlying scientific principles. This second edition includes substantial new material throughout, including the latest findings from the New Horizons, Rosetta, and Dawn space missions, and im-

ages from professional telescopes such as the Hubble Space Telescope and the Atacama Large Millimeter Array.

Winner of the 1987 New York Academy of Sciences Children's Science Book Award, *Exploring the Night Sky* is aimed at novice stargazers anxious to expand their astronomical repertoire beyond

the Big and Little Dippers. Dickinson has designed a superb introduction to astronomy that is clear, concise, and very "user friendly" no matter what the child's age. 50 color photographs and illustrations.